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"It's Not Pixie Dust": An Exploratory Qualitative Case Study of a School-Based Multimodal Tablet Initiative

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An Exploratory Qualitative Case Study of a School-Based Multimodal Tablet Initiative

by

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DEDICATION

This dissertation is dedicated to my husband, James. Your faithful dedication empowered me to press on, even when I didn't want to. Without your love and support, this journey never could have been possible. You are my inspiration, both in my work and in my soul. I will never forget the sacrifices you have made so I could pursue my dreams. I am so lucky to call you my husband and share my life with you. The best is yet to come! For now and evermore.

Thank you to my children, Brendan Patrick, Emma Patricia, and Brian Padraig for inspiring me to do better each and every day! I love you all more than you will ever know!

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ABSTRACT

This dissertation presents findings from a qualitative case study of three English teachers representing varying levels of comfort with technology and years of teaching experience at St. Patrick Catholic High School. This research was motivated by two questions: (1) What are three literacy educators' perceptions of a multimodal tablet initiative at a Catholic High School? (2) How is information regarding the use of iPad technology for literacy disseminated to three High School English teachers within a Catholic School system? Data was collected over a twelve-week period during the first academic year of implementation of a school-based multimodal tablet (iPad) initiative. Implementation during this time period was limited to students in their first and second year of high school. Under the direction of the initiative, teachers were tasked with utilizing the iPad as part of their daily instruction. Moreover, three Apps were highlighted for explicit use for uploading assignments and sharing content with students. Additionally, all textbooks utilized were in digital format. Data collected includes: artifacts, observations, interviews, and reflective field notes. Findings from this research indicate that all participants had positive perceptions of the tablet initiative and its promise for the future of the school and effect on student achievement. They felt, however, many areas that would support the effective implementation of the initiative were overlooked in lieu of the school remaining overly focused on maintaining its competitive edge against neighboring private schools. In essence, the school's leadership utilized the iPads like "pixie dust"- sprinkling them around campus and hoping for an increase in achievement and digital citizenship among students without providing appropriate

support and guidance for the teaching staff. Furthermore, the teachers believed the device presented new difficulties within the classroom dynamic including struggles with classroom management, academic honesty, and networking. The path of dissemination for information was convoluted with leadership members often verbally presenting conflicting expectations and information. While promising, the initiative lacked clearly articulated expectations for how teachers should integrate the device in their classrooms. Information related to the initiative was most often disseminated verbally via faculty meetings, but also uploaded within the school's digital communication system. This digital drive was overly crowded with documents and lacked organization making locating information tedious and challenging. Given the pilot status of this implementation, the administrators did not present fully developed evaluative procedures or expectations for iPad integration creating uncertainty for teachers. These findings offer insight into the need for meaningful and individualized professional development opportunities for teachers that focus on deep interactions with multimodal capabilities prior to the onset of any initiative aiming to integrate iPad technology. Additionally, a clear path of dissemination in which expectations are written, explicit, and correlated with evaluative procedures would likely reduce confusion among teachers. Aligning the goals from all leadership members in an effort to create consistency among the information shared with staff is critical to implementing a technology initiative effectively.

Keywords: Multimodal, Secondary Schools, Literacy, Leadership, Policy

CHAPTER ONE:

INTRODUCTION AND OVERVIEW

Popular culture today is inundated with new technologies ripe with opportunity to engage in deep and critical learning both inside and outside of the classroom (Gee, 2004; Gee, 2007; Jenkins, 2006; Jenkins; 2007). As a result, how teachers teach and how students learn is being examined more critically in an attempt to discover the best means of effectively supporting literacy learning in a population of native technology users (Jenkins, 2009; Coiro, 2012). The current digital environment possesses great potential for influencing how students view themselves both as individuals as well as literate contributors to society (Alvermann, 2010; Skinner & Hagood, 2008; Walsh, 2008).

Accommodating a technologically evolving population is more challenging now than ever before. As Facebook, Twitter, YouTube, iPhones, iPads and other technologies become increasingly popular, so too do the ways in which people communicate and exchange information. Reading, writing, and sharing have evolved into a new, more social and easily accessible format (Bromley, 2010). Students have access to a wide variety of technologies at their fingertips and are utilizing them to systematically perfect their ability to multitask (Carrier, Cheever, Rosen, Benitez & Chang, 2009), diversify learning opportunities, and strengthen their responses to texts (Larson, 2009). In an effort to accommodate the changing needs of students and the general population of a 21st century society, many schools have revamped their curricula to utilize the latest technological trends including interactive white boards, online blogs, portable e-readers, multimodal tablets and, in some cases, fully online learning opportunities. In many

instances, these initiatives include replacing traditional print textbooks with multidimensional, multimodal tablet technology (Fasimpaur, 2004).

The features afforded by multimodal tablet technology, when accessible through the Internet, support literacy development and personalized transactions (Rosenblatt, 1978) and opportunities for increased engagement with a given text (Larson, 2009). Multimodality is defined within this research as an aspect of literacy in which communication can occur in a variety of ways including sound, writing, gestures, and images. (Jewitt & Kress, 2003; Stein, 2008). Such technology can support learning through multimodalities including: interactive activities, sound, and animation. Rhodes (2007) posits multimodal technology can enhance a strong print-based literacy curriculum. Pricer (2010) articulates that multimodal tablets can utilize "metaphysical elements" (p. 56). Students could, "imagine . . . jumping in the book and running with the dinosaurs or flying with a flock of birds, or . . . actually think [they are] listening to a concert being given by Bach or Beethoven" (Pricer, 2010, p. 56). Learning, as a result, can become more relevant, meaningful, and multidimensional.

With a current student population that is both native to consumption and frequent consumers of digital technology, many schools are implementing drastic changes to their approaches to teaching and learning (Rowsell, 2013). This new approach focuses heavily on touch-based technologies and new methods of reading and writing through digital literacy. These new approaches utilize multisensory tools and are highly visual and interactive (Oakley, Howitt, Garwood, & Durack, 2013). Research on iPads has shown that the tool can be beneficial in increasing student engagement (Cumming & Draper, 2013). As such, two specific questions guided this study:

1. What are three literacy educators' perceptions of a multimodal tablet initiative at a Catholic High School?
2. How is information regarding the use of iPad technology for literacy disseminated to three High School English teachers within a Catholic School system?

Significance of the Study

This study will advance the understanding present within today's field of research in technology use within secondary schools, literacy leadership, and policy design and implementation. Together, these elements contribute to the current climate of educational reform. Through the use of a case study design, the unique perceptions of teachers and their effect on multimodal tablet use was explored.

Teaching and Research Experiences

As a former classroom educator, I feel my experiences have helped to shape my understanding of how students learn, the impact of technology on teaching and learning, and the role that leadership and policy play in the development of learning in the secondary English classroom.

Teaching.

My classroom teaching experiences began in August of 2006. During this time I began a 5-year career as a 9th and 10th grade English and Remedial Reading Teacher at a large suburban public high school. During my final year as a classroom teacher, I was also assigned the duty of serving as the head of the Reading department. My experiences included opportunities teaching honors, on level, and remedial students. My interest in technology integration began to evolve as I observed my students' interests in digital learning and many students' apathy toward reading. Throughout several years and a variety of teaching experiences, it became apparent to me that,

when technology was introduced in an authentic and meaningful way, my students were more engaged and eager to participate. Technology provided exciting access to new knowledge that was previously unavailable to my students.

Research.

My interest in technology grew into research completed as part of my doctoral studies. As part of Writing Research course, I conducted a review of the literature related to how technology impacted writing achievement in secondary schools. From this, I was able to present my findings at several conferences and even publish my results in *The Contemporary Educational Technology Journal*. Additionally, I conducted a survey study of teachers' self-reported attitudes toward a mandated Kindle initiative at a large suburban high school in Florida. My findings have been presented at several national conferences and was also selected as a winner at the 6th annual University of South Florida Graduate Research and Postdoctoral Symposium for excellence in research. These two studies serve as the impetus for this dissertation research.

Conceptual Framework

The theoretical framework that guides this research draws on two streams, focusing on the Social Cognitive Theory developed by Albert Bandura (1969, 1977, 1997) and the Transactional/ Reader Response Theory developed by Louise Rosenblatt (1978, 1994). I believe these two theories help to support the social interactions occurring within a school system. Literacy, I believe is an essentially social practice (Gee, 2007; Lankshear & Knobel, 2003) with mutual benefits for participants. The shared interactions between such stakeholders help to formulate the responses and behaviors that occur within the literacy classroom setting. Furthermore, those published policies that school systems subscribe, can effect direct change

through the interpretation and unique transactions (Rosenblatt, 1978, 1994) of each stakeholder. The way in which one stakeholder transacts with a given text may be distinctly different from another. Sandra J. Stein (2004) posits that "all cultural configurations have consequences for practice" (p. 20) and, in some cases, "the culture of policy can lead to practices that run counter to the intended policy goals" (p. 20). As such, attempting to develop an understanding of the unique transactions occurring within individual literacy stakeholders is critical to understanding the ways in which such policies are implemented and interpreted.

Social construction of meaning, Bandura (1977) ascertains, has "tremendous multiplicative power" and "can transmit new behavior patterns simultaneously to vast numbers of people in widely dispersed locations" (p. 39). The idea that the interaction between people and their environments shape their knowledge guides this inquiry. The interactions and transactions, unique responses to a given text, (Rosenblatt, 1994) between varying individuals can yield new "meanings" and perspectives (1994, p. 1369). The "texts" that stand to influence a person are broadly defined as a "set of signs capable of being interpreted as verbal symbols" (p. 1369) and can, therefore, impact the receiver in a variety of unique and meaningful ways.

Bandura (1977) postulates "humans do not simply respond to stimuli; they interpret them" (p. 59). These interpretations can lead to differences within an observer and, subsequently, "a new paradigm [requiring] a break with entrenched habits of thinking. . . and the old stimulus response, subject-object, individual-social dualisms give way to recognition of transactional relationships" (Rosenblatt, 1994, p. 1364). The culmination of these interpretations and social influences, consequently, can lead to a shift in the paradigm of the observer.

Operational Definitions

This case study examines the perceptions of three High School English teachers' perceptions of multimodal tablets as part of a mandated technology initiative. Furthermore, I explore the path of dissemination for information and content related to implementation, evaluation, and expectations of the device's classroom use. To promote clarity and consistency within this study, the following terms have been defined. These operational terms will be utilized as stated throughout the study.

Assistant Principal of Curriculum: The assistant principal of a given school whose supervises curriculum fidelity for the school.

Classroom English Teacher: A teacher of literacy employed by a given school diocese.

English Instruction: Instruction occurring within the confines of an English course.

Literacy Leader: An individual in a position to influence literacy instruction within a given classroom, school, or school district.

High School: A secondary public school where students in grades 9-12 attend.

Multimodal: an aspect of literacy in which communication can occur in a variety of ways including sound, writing, gestures, and images. (Jewitt & Kress, 2003; Stein, 2008; Unsworth, 2014).

Multimodal Tablet: a tablet computer capable of connecting users using a variety of communicative measures

Off-Task Digital Behavior: digital behavior in which students utilize their multimodal tablets to visit websites or Apps other than what the teacher has assigned. Most often, students attempt to hide these behaviors from his or her teacher.

Positional Level: an educator's hierarchical position within his or her diocese. The positional levels described within the context of this study represent a pyramid structure. Note- Due the technology leadership's ability to evaluate the teaching faculty (including the chairs of each department, they are displayed at a higher level than all members of the teaching staff). See Figure 1.1

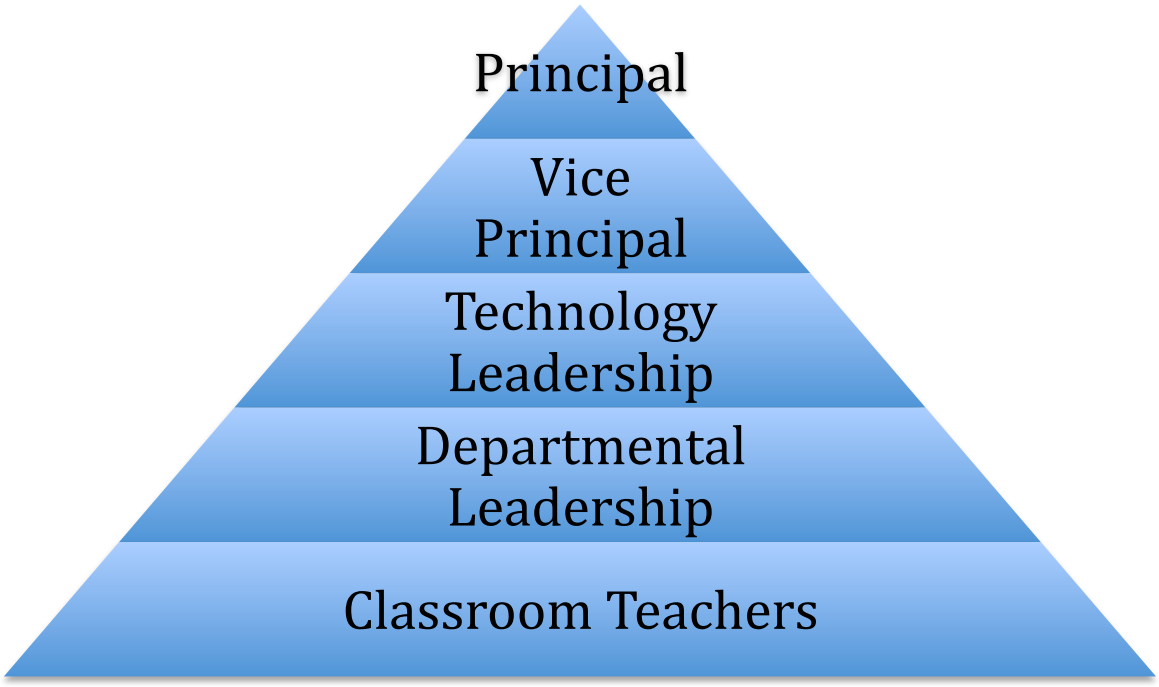


Figure 1.1 Leadership Hierarchy

Limitations of the Inquiry

Due to the exploratory nature of this study, I was limited by data and responses provided by each of my participants. As such, it is possible that interview responses were influenced by my presence and/or their *perceptions* of the responses they may have *believed* I was hoping to hear. Furthermore, my presence in the classrooms of the primary participants may have

influenced their instructional decisions or utilization of the multimodal tablets. My own ability to be subjective is an additional limitation that is addressed through transparency. A final limitation would be the lack of generalizability. As a qualitative study, however, this is a limitation that should be expected as qualitative inquiry cannot be generalized to other populations.

Summary

The organization of this dissertation is as follows: Chapter One provided an introduction to this dissertation as well as background regarding multimodalities in secondary schools. Chapter Two enumerates additional background regarding my theoretical framework and review of current literature. Chapter Three provides an account of the methods used in this study. Chapter Four reports on the findings from this exploratory study and Chapter Five discusses implications for current and future practice.

CHAPTER TWO:

REVIEW OF THE LITERATURE

Used as a means for acquiring new knowledge, socializing, and sharing information, technology is an ever-present part of our existence. We are surrounded by technology in nearly every facet of our daily lives- iPods, iPads, Facebook, Twitter, and beyond. These digital forms of technology, known as information and communication technologies (ICTs) are not only present in our personal lives, but are permeating academic contexts as well. Literacy educators are at the forefront, providing many of the foundational skills students require to interact with and process these new technologies as they emerge (Hutchinson & Reinking, 2011). In an effort to meet the demands of their students and the requirements set forth by the Common Core State Standards, which require schools to focus attention on digital learnings for reading and writing, many schools and districts are adopting the use of multimodal tablets such as Kindles, iPads, and Nooks in lieu of paper textbooks in an effort to enhance literacy learning (Kress, 2003; Hutchinson & Reinking, 2011). While such efforts to facilitate technology are promising for the future, often times implementation is merely a superficial replacement for paper texts and, thus students do not employ the full multimodal capabilities available in the device (Cuban, 2011; Leu, 2006).

This dissertation serves as a means for examining the perceptions related to multimodal tablet classroom use of three unique Literacy educators within a single Catholic High School. Furthermore, I investigated the path of how information related to the use of multimodal tablet technology is disseminated to each of the three abovementioned literacy educators. This was

accomplished through the analysis of three bounded case studies. The purpose of this chapter is to review those theoretical perspectives and relevant research that helped to influence the development of this dissertation study. This study was be guided by the following research questions:

1. What are three literacy educators' perceptions of a multimodal tablet initiative at a Catholic High School?
2. How is information regarding the use of iPad technology for literacy disseminated to three High School English teachers within a Catholic School system?

The theoretical frameworks that have contributed to my understanding of how technology policy, teaching practice, and literacy are interwoven are: Albert Bandura's (1969, 1977, 1997) Social Cognitive Theory and Louise Rosenblatt's (1978, 1994) Transactional/ Reader Response Theory. Each of these theories are discussed at length. Next, I segue into a detailed background and history of standards-based education and those polices that have influenced the current state of education and focused attention on technology practices. Finally, I discuss the evolution of literacy to literacies, The New Media Literacies, and relevant research on multimodality in secondary schools.

Methodological Review

Literature examined within this review explores what is currently known about multimodality and multimodal tablets in secondary schools. Furthermore, research contributing to The New Literacies, 21st Century Literacies, and The New Media Literacies are discussed to develop background and support my understanding of multimodality. Studies that met the following inclusion criteria were incorporated into this analysis: (a) empirical research published in English language and in a peer reviewed journal or published dissertation (b) qualitative,

quantitative, or mixed methods design (c) focused on multimodal tablet devices of any kind and, (d) included participants who were either high school or middle school students or faculty members.

I utilized a three-phase systematic search. My first phase involved an electronic search of ERIC, Google Scholar, JSTOR Education, Academic Search Premier and ProQuest. A second phase focused on a manual, hand search of key journals. My third phase focused on bibliographic searches of previously acquired literature. As previously mentioned, information related to The New Literacies, 21st Century Literacies, and The New Media Literacies was also acquired to situate my understanding and provide background knowledge related to multimodality. Inductive analysis was utilized while reviewing relevant research to identify "patterns of meaning in data so that general statements about phenomena under investigation can be made" (Hatch, 2002, p. 161).

Theoretical Lens

Interpretivism. Interpretivism, derived historically from the term 'hermeneutics,' helps to guide scholars as they interpret content around them (Crotty, 2010, p. 87). This perspective posits "an understanding of the text that is deeper or goes further than the author's own understanding" and that the writing process 'has the potential to uncover meanings and intentions that are . . . hidden in the text'" (Crotty, 2010, p. 91). Because of this deep and meaningful interaction with data, researchers are thus able to discover meaning in ways that would have been otherwise impossible.

Theoretical Framework

The theoretical framework utilized for this research study follows two distinct streams, focusing on the Social Cognitive Theory developed by Albert Bandura (1969, 1977, 1997) and

the Transactional/ Reader Response Theory developed by Louise Rosenblatt (1978, 1994). I believe these two theories help to support the social interactions occurring between various literacy stakeholders. Literacy, I believe is an essentially social practice (Gee, 2004; Lankshear & Knobel, 2003) with mutual benefits for participants. The shared interactions between such stakeholders help to formulate the responses and behaviors that occur within the literacy classroom setting. Furthermore, those published policies that school systems subscribe, drawing on Rosenblatt, effect direct change through the interpretation and unique transactions (Rosenblatt, 1978 1994) of each stakeholder. The way in which one stakeholder transacts with a given text may be distinctly different from another. As such, each unique transaction is critical to the implementation of policies at the district or diocesan, school, and classroom levels. These two theories are enumerated in more specific detail in the two sections below.

Social Cognitive Theory. The Social Cognitive Theory (Bandura, 1969, 1977, 1997) describes the importance of learning through observation. Renamed after the original title of Social Learning Theory, Albert Bandura aimed to emphasize the importance of cognition through two types of learning: observational interactions and vicarious interactions. His theory emphasizes that, at times, vicarious interactions can, in fact, be more influential than direct experiences. As individuals, there is the potential to learn more through the experiences of others than by directly experiencing an event ourselves. This teaching is proven by the fact that it is impossible to experience every learning situation directly. Rather than having to experience each learning directly, individuals can learn through their shared experiences with others.

Direct observations occur within four stages of learning. Bandura posits these four stages as being:

1. Attentional Phase—During this stage the observer observes another

2. Retention Phase—During this stage, the observer reflects over the observation and analyzes what happened
3. Reproduction Phase—During this stage the observer further reflects on the observed behavior and utilizes this experience to mimic the occurrence
4. Reinforcement Phase—During this final stage the observer is given reinforcement related to their mimicked activity. The reinforcement may occur in the form of acknowledgement that a certain behavior has occurred or providing positive or negative feedback related to the quality of the behavior.

Bandura's model includes three main defining elements: biological and psychological characteristics of the person, the person's behavior, and the environment. Highly interdependent on one another, these three elements would work together to support a literacy initiative. The school itself would represent an imposed, yet improved, environment rich in literacy instruction and discussion. Through appropriate and effective literacy instruction, the teachers, while working with a literacy leader, have the potential to move toward a cognitively created environment. Through exposure to various meaningful and appropriate texts, the teacher can utilize the rich detail and experiences to create a new environment that is both meaningful and developmentally appropriate for their cognitive development. Thus, through these shared experiences between the literacy leader and classroom teacher(s), new learning and insight can be achieved.

Critical to Bandura's theory is the notion of *self-efficacy* and *agency* (1977). Self-efficacy represents "beliefs in one's capabilities to organize and execute the course of action required to produce given attainments" (Bandura, 1997, p. 31). Self-efficacy affects us in every facet of our lives and existence. It is not limited to our professional or personal lives. When someone exerts

high levels of self-efficacy, they believe they can persist even when faced with difficulty. It is my belief that an effective and meaningful relationship between various literacy leaders will yield higher levels of self-efficacy through their shared interactions. Collective efficacy, an extension of the self-efficacy construct involving multiple individuals, can occur when the literacy leader mutually shares the goals and beliefs and teachers working with him or her. When teachers, within a given school system, have confidence in the abilities of the literacy leader, collective efficacy is more likely to be achieved. I posit that, it is through collective efficacy, that substantial and meaningful literacy reform can occur.

Transactional Theory. Louise Rosenblatt's Transactional/ Reader Response Theory discusses the unique nature of each individual's response to reading a given text. Such responses emerge organically and continuously as the *reader* interacts with a *text*. Words are devoid until the reader *transacts* with them. Transactions occur each time a person reads. Reading is a two-way experience. Without the reader, the text serves no purpose and is absent of meaning.

She discusses the differences between the *efferent* and *aesthetic* responses to reading (Rosenblatt, 1978, 1994). The efferent response is situated within facts and concrete details whereas the aesthetic response relates to emotional reactions and personal feelings. The efferent approach to reading focuses on the acquisition of new knowledge while the aesthetic relates to passion and motivation. These stances, however, can change throughout a reading and it cannot be assumed that a certain type of text will result in a certain type of reader response.

Rosenblatt helps to highlight the unique ways in which individuals interact with texts and gain personalized meaning. Acknowledging the personal experiences and background of a person is critical to understanding how they might transact with a text.

Paradigms of Inquiry. Paradigms of inquiry facilitate organization of a systems of beliefs related to a person's understanding of "the nature of the world, the individual's place in it, and the range of possible relationships that work" (Lincoln & Guba, 1994, p. 107). Within this, there are three identified beliefs:

1. Ontology- the nature of reality
2. Epistemology- how we come to know this reality
3. Methodology- the processes by which we acquire this knowledge

Lincoln and Guba (1994) describe four paradigms of inquiry- positivist, post-positivist, critical theory, and constructivist. For this inquiry, I draw upon the constructivist paradigm as it relates to the social construction (Dewey, 2005; Vygotsky, 1986) of meaning. Each interaction with another person or transaction with a text (Rosenblatt, 1978) promotes new opportunities for learning and the creation of meaning. Through my shared experiences and interactions with each primary and secondary participant, I construct a new meaning alongside each of them (Hatch, 2002

A Fusion of Theories. A fusion of these two frameworks guided this dissertation. As information descends down throughout the leadership ladder often beginning at the federal level, moving to an individual state, diocese, school, and ultimately classroom, there are many transactions and interactions that occur. I posit that, as leaders read, review, and interpret educational policy transactions (Rosenblatt, 1978, 1994) occur that directly influence how the policy will be instituted. Through their unique transactions (Rosenblatt, 1978, 1994) with the written text, meaning is made. Policy does not exist in isolation, but rather through the interactions, shared experiences, and transactions of others as it trickles down from leaders to subordinates. Through these shared experiences with education policy and mutually occurring

transactions (Rosenblatt, 1978, 1994), each stakeholder stands to interpret a particular policy in a personally meaningful and socially co-constructed way (Dewey, 2005; Vygotsky, 1986). As such, policy evolves from a written document that must be transacted with by each individual stakeholder (Rosenblatt, 1978, 1994) to a viable and socially constructed call to action. Figure: 2.1 illustrates this fusion of two theoretical streams.

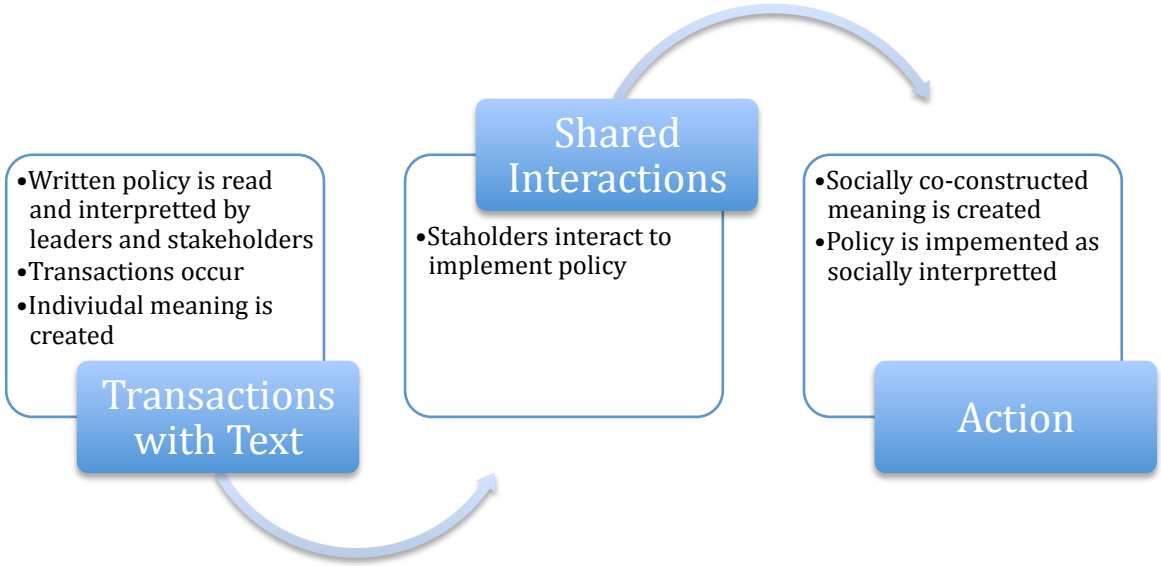


Figure: 2.1. Fusion of Theories.

Relational Leadership. Relational Leadership Theory describes the theory that resolves that the effectiveness of a leader is due to his or her capability to promote and develop positive relationships within the organization that he or she is employed (Uhl-Bien, 2006; Wheatley, 1992). This model of leadership relies heavily on:

1. The ability to include subordinates
2. The ability to empower subordinates

3. Purposeful and meaningful decision making
4. Ethical behavior and decision making
5. A process oriented approach to decision making

Relational leadership focuses heavily on evoking positive changes through the inclusion and empowerment of all stakeholders. In essence, an individual can never be as strong as the group as a whole from which he or she came. Figure 2.2 represents the elements contributing to effective relational leadership.

Figure 2.2. Relational Leadership.

Policy Implementation.

Policy in education can guide participants toward action within established goals. These goals typically are representative of an ultimate positive effect on some element related to

education and an attempt to correct or reduce a problem that is perceived to be a hindrance. Guba (1984, p. 64) describes eight definitions including:

1. A statement of intents or goals
2. An compilation of existing decisions from a governing body
3. A framework to optional action
4. A specific strategy to help alleviate a perceived hindrance or difficulty
5. An authorized behavior
6. A norm of conduct described by constant regularity
7. A policy system resulting in a collective effect on multiple actions
8. The result on the participant of the policy producing and executing the system

Within these definitions, three types of policies emerge (Guba, 1984):

1. Policy as intention
2. Policy in implementation
3. Policy as experienced

To be successful, a policy must have clearly established goals and accompanying resources available to the stakeholders. Those policies that do not have clear goals and resources often result in unintended consequences, problems for stakeholders, conflicts, and confusion (Marshall & Patterson, 2002). When policy makers and stakeholders, however, can work together, the result can be a sense of community and uniformity that often results in a positively for all involved (Hoffman, 2002). To be successful, Fullan (2001) suggests that educational policies and the processes for which they are implemented include:

1. Clear moral purpose
2. Establishing a clear foundation

3. Communicating the goals at large clearly
4. Intellectual accountability
5. Capacity building
6. Authorizing appropriate monetary support
7. Long-standing leadership

Standards-Based Education

Standards-based education has been part of the national conversation for the past four decades with the belief being that this type of educational focus will yield higher scores on national and international assessments and a more equitable access to high quality education for all (McGuinn, 2006; Swanson & Stevenson, 2002). Within the last two decades, the federal government has become significantly more involved in what is happening in our school systems (Allington, 2002; Fang, Fu, & Lamme, 2004). While the policies being utilized have evolved considerably, the task of interpreting them has fallen largely on the individual states and school districts. How the leadership interprets such policies and initiatives can have a great impact on how the policies are implemented (Grossman & Thompson, 2004; Palmer & Rangel, 2010). The policies and initiatives contributing to the current state of education in the United States are enumerated in detail below.

Elementary and Secondary Education Act. The Elementary and Secondary Education Act was established under the guidance of Lyndon B. Johnson's presidency. A result of the Sputnik space race, the government asserted a shift in focus toward improving education for American children (Darling-Hammond & Snyder, 1992). This act providing funding for elementary and secondary education, was enacted in 1965, and has been reauthorized nearly every 5 years since its inception, most currently through the signing of the Every Student

Succeeds Act of 2015. The Elementary and Secondary Education Act provides funding to further education and reduce the achievement gap in reading, writing, and mathematics. Furthermore, it explicitly forbids the development of a national curriculum, though there is some question as to whether the most recent bill adheres to this component of the law.

A Nation at Risk. In 1983, the educational report titled "A Nation at Risk" was published under the guidance of President Ronald Reagan's administration (A Nation at Risk, 1983). This document, created by the National Commission on Excellence in Education, asserted that public schools were failing our students and focused on changes to the American educational system, primarily American high schools. Recommendations included five separate categories including: content, standards and expectations, time spent in school each day and the number of classroom days per year, teaching salaries and teacher competence, and leadership and fiscal support (1983). These categories would later become the basis for future standards-based policy initiatives.

Goals 2000. Following the release of "A Nation at Risk" was the implementation of Goals 2000: Educate America Act (Goals 2000; Educate America Act, 1994). This piece of legislation, signed into law by President Bill Clinton on March 31, 1994, included eight pieces for education reform that would be completed by the year 2000. These goals included:

1. All children in America will start school ready to learn
2. The graduation rate for high school will reach at least 90%
3. Before exiting grades 4, 8, and 12 all students will be able to demonstrate proficiency in their content area coursework
4. Achievement in science and math will lead the United States to become the leading nation in the world

5. All Americans will be able to compete in the global economy
6. United States' schools will be devoid of illegal substances such as drugs and alcohol
7. Accessible professional development will be provided to maintain the skills and knowledge of teachers
8. Schools will develop outreach programs to facilitate involvement between parents and their children

A shift toward technology began as part of this reform as well as with the allocation of a $2 million dollar grant known as the Technology Literacy Challenge Fund. The goal of this initiative was to provide opportunities for all students to have access to technology by the year 2000. Additionally, President Clinton hoped, through the grant, to ensure all students had access to modern computers, online information, and software to support their learning.

No Child Left Behind. Proposed on January 23, 2001 and signed into law on January 8, 2002, like its educational reform predecessors, No Child Left Behind focused on school and teacher accountability and standards-based education. The overarching goal of this act was that 100% of students (including economically disadvantaged and special education students) would be able to demonstrate proficiency in reading, writing, and mathematics by the year 2014. While there were no nationally created standards, each individual state was tasked with developing a set of standards with which to teach, assess, and ultimately promote its students following a demonstration of content proficiency. Funding for each state was directly tied to a state's willingness to provide high-stakes assessments, and demonstrate proficiency at specified grade levels, to its publicly educated students. Furthermore, those schools receiving Title I funding were also required to exhibit annual yearly progress and increase student achievement every year when compared to the previous year's class. Schools that failed to demonstrate annual yearly

progress were provided with additional support in an effort to increase student achievement. If a school was not able to reach the requirements of annual yearly progress for two consecutive years, students enrolled in that school were able to transfer to another higher-performing school or receive tutoring at no cost to their family.

The Enhancing Education Through Technology Act of 2001. In an effort to increase student achievement, under The No Child Left Behind Act, the Enhancing Education Through Technology Act of 2001 (NCLB, 2002) mandated that technology be fully integrated into all areas of curriculum and instruction by December 31, 2006. This initiative provided monetary assistance to states in their efforts to make technology more accessible and more meaningful to student learners. This program also aimed to improve technological professional development for teachers and educational leaders. This reform also helped pave the way for future initiatives (including the one highlighted within this study) that would include a focused attention on technology integration.

Race to the Top. In 2009 President Obama released a new educational reform established to promote competition between states for $4 billion in funding. This federal funding was awarded to those states that were "leading the way with ambitious yet achievable plans for implementing coherent, compelling, and comprehensive education reform" (U.S. Department of Education, n.d.). States wishing to receive some of the available funding proposed education reform plans for their state and were held to a promise to follow through and produce results in achievement.

Common Core State Standards Initiative. In an effort to support our students to be "best positioned to compete successfully in the global economy" (Common Core State Standards Initiative, 2012), the Common Core State Standards were initiated by the National Governors

Association and the Council of Chief State School Officers. In 2010, standards for English language arts and Mathematics for grades Kindergarten through twelfth grade were released and all states were encouraged to adopt them (Kober & Rentner, 2012). Encouragement to adopt was provided through financial incentives provided by Race to the Top funding from the federal government. As of 2014, forty-five states have adopted the standards with Texas, Virginia, Alaska, Nebraska, and Indiana being among the first of many states to opt out. As specified by the Council of Chief State School Officers, the standards are meant to be:

1. Research and evidence-based
2. Aligned with college and work expectations
3. Rigorous
4. Internationally benchmarked (Common Core State Standards Initiative, 2010).

According to the Common Core State Standards mission statement (2012) the standards were designed to:

> Provide a consistent, clear understanding of what students are expected to learn, so teachers and parents know what they need to do to help them. The standards are designed to be robust and relevant to the real world, reflecting the knowledge and skills that our young people need for success in college and careers.

The Common Core State Standards for English and language arts (K-12) include anchor standards for Reading, Writing, Speaking and Listening, and Language. Within each grade there are specific standards and goals for learning.

Common Core and Technology. As currently written, the Common Core State Standards do not include specific standards for technology or media (Common Core State Standards, 2010), but rather focus on an overarching goal of promoting digital literacy for

students through information communication technologies and media that are "deeply infused throughout teaching, curriculum, and learning" (Dalton, 2012, p. 333). The standards posit goals such as preparing students to be able to, "analyze and create a high volume and extensive range of print and non-print texts in media forms old and new" (Common Core State Standards for English Language Arts, 2010, p. 4).

Criticism of the Common Core State Standards. There has been much controversy and opposition surrounding the implementation of the Common Core State Standards. Citing participation as a prerequisite to receiving Race to the Top funding, many felt unfair tactics were in place to ensure states would participate in the new initiative (Wyse, Zacher Pandya, & Doecke, 2012). Additionally, it is argued that policymakers were not transparent when citing that, although the Common Core State Standards state that expertise was provided by various stakeholders including, "parents, teachers, school administrators and experts from around the country," (Wyse et al, 2012, p. 2) these experts, including The National Education Association, the National Teachers' Union, the National Council of Teachers of Mathematics, and the National Council of Teachers of English, were only consulted after the standards had already been written (2012). Rather than not having their voices heard at all, these groups opted to participate when invited to do so.

Further complaints include the rush to implement the standards, lack of training for educational personnel (McGrory, 2013), lack of communication to teachers and parents regarding the changes occurring in education (Dunkle, 2012) and substantial expenses associated with training and new materials (Gewertz, 2013). Due to the abovementioned concerns there have been some efforts, including within the state of Florida, to rescind participation in the reform.

Florida and the Common Core. Florida adopted the Common Core State Standards on July 10, 2010 (Common Core State Standards Initiative, 2014). Since this adoption, there have been two attempts to prevent implementation, but, as of this writing, both have failed. These attempts include Florida House Bill 25: Public School Curricular Standards and Assessments (2014), sponsored by Florida Representative, Debbie Mayfield, and Florida Senate Bill 1316: Public School Curricular Standards and Assessments (2014), sponsored by Florida Senator Gregory Evers. Supporters of both bills rallied for the support of Governor Rick Scott to take executive action, if legislative attempts were unsuccessful (McGrory, 2014).

Florida House Bill 25 (2014) was first introduced by Florida Representative Debbie Mayfield of District 45 in an effort to pause the implementation of the Common Core State Standards in Florida. Representative Mayfield argued that two pieces of communicative requirements had not been met. These included (a) public hearings in each congressional district and (b) a cost analysis of implementation (Gonzalez, 2013; Postal, 2014). The bill was originally filed on August 28, 2013 and died in the Education Appropriations Subcommittee on May 2, 2014 (2014).

Florida Senate Bill 1316 (2014) was filed on February 26, 2014, one week after Florida committed to the Common Core State Standards, and died in Education on May 2, 2014. This was the second attempt to block the implementation of the Common Core State Standards in Florida. Senator Gregory Evers requested that implementation be delayed until the following requirements were met:

1. Requirements for the adoption or revision of curricular standards
2. Florida to withdraw from the Partnership for Assessment of Readiness for Colleges and Careers (PARCC)

3. Prohibiting assessments aligned to the Common Core (2014; Solocheck, 2014)

Following Florida's Education Summit Meeting, Governor Rick Scott elected to rescind Florida's participation in the Common Core State Standards Initiative as well as the assessment tied to it, The Partnership for Assessment of Readiness for College and Careers (PARCC). In his Executive Order, Governor Scott stated he hoped to, "address state assessments, ensure student data security and support a transparent and understandable school accountability system" (Exec. Order No. 13-276, 2013). Governor Scott also created a six-step plan for Florida to develop academic standards. This plan included:

1. Selecting an assessment that meets the needs of Florida students, teachers, and parents and not the federal government.
2. Developing a process for educational stakeholders to provide their input about the standards
3. Notifying all stakeholders of the impending changes and lack of participation in the Common Core State Standards Initiative no later than December 1, 2013
4. Codify any and all documentation related to the Common Core State Standards Initiative
5. Codify classroom and assessment standards to be used during the 2014-2015 academic year
6. After December 31, 2013 continue to revise the Sunshine State Standards as necessary (Scott, n.d.)

Based on Rick Scott's actions, a new set of standards were developed to better accommodate the students, teachers, and parents of Florida. These standards, known as the Mathematics Florida Standards (MAFS) and Language Arts Florida Standards (LAFS), were approved by the Florida

State Board of Education on February 18, 2014 with full implementation occurring during the 2013-2014 academic year (Florida Department of Education, n.d.). These new standards, however, still closely model the Common Core as Florida is still considered an adoption state. A requirement for each adoption state is that 85% of the standards be consistent with the CCSS and 15% may be developed by the individual state (ASCD, n.d.).

Standards-Based Education in Technology

Technology standards have been created in an effort to advance students' use of technology and increase achievement in various content areas. The International Society for Technology in Education (ISTE) has released several sets of standards that have been adopted by many states in the United States and countries around the globe. Additionally, while the Common Core States Initiative does not include explicit standards for technology use, the standards, as currently written, do require teachers to support students as they become digitally literate.

Standards for technology represent, "a set of interrelated, research-based policy principles to support schools in improving students' literacy achievement" (Au & Valencia, 2010). According to the RAND Corporation (2016), the goal of standards-based education is to, "establish metrics to assess student performance and teacher effectiveness, using standardized instructional materials and testing" (p.1). RAND (2016) continues by asserting, "individual performance is measured against a set of common criteria rather than in relation to other students" (p.1). Evidence, however, continues to mount that these lofty goals embedded within such published policies are not resulting in the types of learning gains that the developers had hoped (Fuller, Wright, Gesicki, & Kang, 2007).

The most recently implemented policy, The Common Core State Standards' effects on

student learning and achievement are not yet known. Murphy and Torff's (2016) survey study of 370 of teachers, however, demonstrated that one possible outcome is a decrease in teachers' perceived capacity to teach effectively. The researchers posit that the current policy climate promoting high levels of teacher accountability combined with standards-based education cause many teachers to doubt their own aptitude for teaching and supporting learners.

Common Core State Standards (CCSS). As of this writing, there are no explicit standards for technology included within the Common Core State Standards. The standards do, however, posit the need for preparing students for a future rich in a digitally literate global society. As such, the standards "focus on what is most essential, they do not describe all that can or should be taught. A great deal is left to the discretion of teachers and curriculum developers" (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010, p. 6).

International Society for Technology in Education (ISTE). The International Society for Technology in Education is the "premier nonprofit organization serving educators and education leaders committed to empowering connected learning in a connected world" (ISTE, 2014). Serving as the leading organization for scholarship in global technology standards and strategies, ISTE aims to "positively impact learning, teaching, and leading in our technology-powered world" (ISTE, 2014)

In 1993, the International Society for Technology in Education released its first set of standards for technology in education. There were six general categories for students ranging from: (1) social, ethical and human issues; (2) basic operations and concepts; (3) technology problem solving and decision making tools; (4) technology productivity tools; and (5) technology research tools (ISTE, 2007). In 1997, ISTE reorganized its approach and revised their

standards into three categories: Basic Computer Operations and Concepts, Personal and Professional Use of Technology, and Application of Technology in Instruction. In 2000, based on the explosion of technology use, the standards were again revised and expanded to include six categories. These six categories include: Technology Operations and Concepts, Planning and Designing Learning Environments and Experiences, Teaching, Learning and the Curriculum, Assessment and Evaluation, Productivity and Professional Practice, and Social Ethical, and Human Issues. In recent years, the standards have expanded to include stakeholders outside of students including administrators in 2009, technology coaches in 2011, and computer science teachers in 2011 (ISTE, 2011). To support the purposes of this dissertation, the standards for teachers and administrators are listed below. ISTE's standards for teachers are the standards for "evaluating the skills and knowledge educators need to teach, work, and learn in an increasingly connected global and digital society" (ISTE, 2008). These standards include:

Standard One: Facilitate and inspire student learning and creativity

> Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments.

Standard Two: Design and Develop Digital Age Learning Experiences and Assessments

> Teachers design, develop, and evaluate authentic learning experiences and assessment incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the National Education Technology Standards for Students.

Standard Three: Model Digital Age Work and Learning

Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society.

Standard Four: Promote and Model Digital Citizenship and Responsibility

Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices.

Standard Five: Engage in Professional Growth and Leadership

Teachers continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective use of digital tools and resources (ISTE, 2008)

ISTE's standards for administrators are "the standards for evaluating the skills and knowledge school administrators and leaders need to support digital age learning, implement technology and transform the education landscape" (ISTE, 2014). These standards include:

Standard One: Visionary Leadership

Educational Administrators inspire and lead development and implementation of a shared vision or comprehensive integration of technology to promote excellence and support transformation throughout the organization.

Standard Two: Digital Age Learning Culture

Educational Administrators create, promote, and sustain a dynamic, digital-age learning culture that provides a rigorous, relevant, and engaging education for all students.

Standard Three: Excellence in Professional Practice

Educational Administrators promote an environment of professional learning and innovation that empowers educators to enhance student learning through the infusion of contemporary technologies and digital resources.

Standard Four: Systematic Improvement

Educational Administrators provide digital age leadership and management to continuously improve the organization through the effective use of information and technology resources.

Standard Five: Digital Citizenship

Educational Administrators model and facilitate understanding of social, ethical and legal issues and responsibilities related to an evolving digital culture. (ISTE, 2009)

ISTE believes technology in education can help to "meet and exceed the rigorous learning goals embedded in the Common Core State Standards by providing access to tools and resources that personalize instruction and [create] rich, engaging and relevant learning environments" (ISTE, n.d.) The organization also posits their standards exemplify best practice and will be useful for providing professional development and support to meet the demands in store for educators, students, and parents (ISTE, n.d.).

To be successful, Fullan (2003) suggests that educational policies and the processes for which they are implemented include:

1. Clear moral purpose
2. Establishing a clear foundation
3. Communicating the goals at large clearly
4. Intellectual accountability

5. Capacity building
6. Authorizing appropriate monetary support

ISTE works diligently to support each of Fullan's (2003) levels of effective implementation. In developing a clear moral purpose, ISTE strives to support curriculum and instruction to best prepare learners for a future rich with technology. The standards exemplified represent the foundation with which the organization aims to initially support educators around the globe. Goals are communicated clearly through their website, annual report, free resources, annual conference, and publications. Intellectual accountability is achieved through the various research endeavors and sharing of information that occurs within the organization. It is through the sharing of new knowledge and research that capacity building is effectively achieved. Finally, monetary support can be provided via the organization through various monetary awards and grants awarded each year to support technology integration.

From Literacy to Literacies

Technology in education has undergone a significant evolution throughout the past several decades. Computers being utilized as part of education were first observed in the 1960's at many American universities. Utilizing them, however, was a difficult process as the technology was just emerging. Over time a new computer language known as BASIC was developed which made computers more manageable for learners (Suppes, 1980). During the 1970's Apple computers began permeating many schools across the nation helping to introduce technology to students of all ages and backgrounds (Murdock, 2011). Technology rapidly advanced during the 1980's and 1990's. During the 1980's, home computers become available to the masses. The latest examples of major developments include the Internet Browser in 1992, Email was created in 1993, digital music players in 1996, and the search engine, Google was

created in 1998 (GNC Staff, 2007). This shift toward a new online world helped facilitate the start of new, exciting changes in American classrooms in which technology serves as the main medium for unearthing, investigating, constructing, and disseminating information (Cennamo, Ross, & Ertmer, 2010).

Most recently, and most relevant to this study, is the introduction of hand-held, multimodal devices and tablets. These devices, such as iPads, Kindles, and Nooks (discussed further below), offer unique capabilities enabling the user to surf the internet, take pictures and video, download and read immediately accessible books, send and receive e-mail, and interact with applications (known as Apps) that can support learning and personal interests. The use of these devices to affect secondary student learning is what led to the inspiration behind this dissertation study.

Multiliteracies

The New Media Literacies represent a broad framework that focus on the impact new technologies have on literacy both inside and outside of the classroom (Coiro, Knobel, Lankshear & Leu, 2008; Knobel &Lankshear, 2007). Through the use of these new technologies, it is argued that a *new* type of learning and engagement occurs (Alvermann, 2010; Hutchinson & Reinking, 2011). Literacy today represents the ability to continuously adapt to the constantly evolving new technologies (Gee, 2012; Coiro, Knobel, Lankshear & Leu, 2011). The International Reading Association (2009) posits that:

> To become fully literate in today's world, students must become proficient in the new literacies of the 21st-century technologies. As a result, literacy educators have a responsibility to effectively integrate these new technologies into a curriculum preparing students for the literacy future they deserve (IRA, 2009).

As such, failing to instruct our students in an appropriate way that supports the integration of ICTs leaves our students at a grave disadvantage as they grow and immerse themselves in the digital world (Leu, Kinzer, Coiro, & Cammack, 2004).

History of Multiliteracies. To address the changing and evolving technologies of the time, a group of ten of the foremost scholars in literacy came together in 1996 in New London, New Hampshire. This group, which came to be known as the New London Group, discussed the current state of literacy pedagogy over a period of ten days and created the seminal impetus, "A Pedagogy of Multiliteracies: Designing Social Futures" (1996).

Representing the crowning achievement of their discussions, The New London Group (1995) coined the term "multiliteracies" to update and reconceptualize literacy for the current, modern, technological times. Taking into account a broader understanding of what literacy today is, the group argued for the inclusion of communication tools and media to be added to the modern definition. Multiliteracies represent a language or text that is constantly evolving and changing to become new as to meet the needs of its users (New London Group, 1995). The framework they established posits that individuals identify, read, and, finally, create a new relevant text based on their interactions with the previous text. A *text* is broadly defined as a semiotic system of symbols and codes that can refer to a written piece of text, a gesture, an audio sound, or anything else to be interpreted by the individual making meaning (1995).

Such a concept revolutionized the literacy community and forever changed the way a *text* was viewed. Our conception of literacy evolved from something independent to something societal (Gee, 2007). Engagement in literacy evolved into a participatory event (Jenkins, 2009) that occurs between groups in varying contexts such as: social cultural, historical, and institutional (Gee, 2009). Because of the shared social interaction that must now occur within

literacy exchanges, "literacy" is now referred to as "literacies" (Gee, 2009), and the new media literacies were born (Jenkins, 2006; Gee, 2009; Lankshear and Knobel, 2006). These new literacies are "diverse, dynamic, immediate, interactive, multimodal, rapidly evolving, and requisite for living and learning in the age of information and communication technologies" (Unsworth, 2014, p. 377).

Multimodality

While many unique terms have emerged to support the inclusion of technology in the modern classroom, I have chosen to situate my study within the scope of multimodality. The National Council of Teachers of English defines multimodality as the "integration of multiple modes of communication and expression [that] can enhance or transform the meaning of the work beyond illustration or decoration" (NCTE, 2014). Multimodality emerged as a result of the transition from a primarily print-based culture to one rich with technological devices in which text, sounds, and images can literally soar off the screen has represented one of the most significant changes in communication (Kress, 2003). Current online texts enhance the meaning of text to include images that are both static and in motion. These, in combination with the words on the screen, create an entirely new literacy experience for students, and as such, new opportunities for teachers to facilitate their learning (Bezemer & Kress, 2008). Students are now tasked with developing their own, personally created meaning, as they interact with each and every multimodal element presented to them (Hutchinson & Beschorner, 2013). For example, most learners consume images as the primary mode of developing meaning and use printed text in a supportive role (Hassett & Curwood, 2009). Pahl and Roswell (2005) posit that, "language will not be printed texts with incidental images, but instead texts of all kinds with color, on different fonts, on monitors or mobile phones with sound, gesture, and movement" (p 4). It is

through these elements that the new literacies possess the ability to enhance traditional print-based literacies (Hutchinson & Beschorner, 2013). The discussion of multimodality in schools is of great concern because of the notion that devices (such as the iPad within this study) are most often utilized to maintain the status quo rather than to enhance literacy education for students (Hutchinson & Beschorner, 2013; Hutchinson & Reinking, 2011).

Leadership and Technology. With respect to technology initiatives, school-based leaders are most often tasked with the duties of developing and facilitating such endeavors (Ashbaugh, 2013). The roles of such leaders are most often viewed as focused solely on results and regulating policy rather than positively enriching practice and pedagogy (McFarlane, 2011). Innovative outcomes, however, can be difficult to clearly enact within such goals (Scott, Coates & Anderson, 2008). Varying approaches from leadership personnel may yield unique responses from teaching staff. Factors such as objectives, cost, and pre-determined learning outcomes may leave instructional staff with little room for input and creativity (Ashbaugh, 2013).

There is one type of multimodal devices discussed within this dissertation: The Apple iPad. The Apple iPad is discussed because of its use within the school selected for this study. Its capabilities are briefly enumerated below.

iPad. The iPad is produced by Apple Incorporated and is officially labeled as an IOS-based tablet computer. The first iPad was released to the public on April 3, 2010 to wide success and, as of June 2014 over 200 million iPads have been sold ("News and Much More from Apple's IPad," 2014). As of this writing, there have been six versions of the iPad released or announced to consumers (iPad Air 2, 2014). These include:

1. iPad (first generation) – released April 3, 2010
2. iPad 2- released March 11, 2011

3. iPad (3rd generation)- released March 16, 2012
4. iPad (4th generation)- released February 5, 2013 and rereleased March 18, 2014
5. iPad Air- released November 1, 2013
6. iPad Air 2- announced Oct 16, 2014, but not released as of this writing

Features found within the iPad include the use of a touch screen, access to Wi-Fi, the ability to take photos and videos, play music, browse the internet, the ability to download and utilize Apps, voice dictation, and fingerprint and scratch resistant glass. Within the iPad, there is an iBooks application that a user may use to download e-books directly the tablet (iBooks, 2014).

Technology Integration

Integrating technology into today's schools is a challenging endeavor ripe with possibility and potential for secondary learners. As such, teachers are beginning to reevaluate how they teach and how many students learn (Foote, 2012). Multimodal technology can assist in teacher planning and allow for more flexibility with student learning. Students are no longer limited to the confines of the classroom or library walls (Tualla, 2011). Multimodal integration is changing the way classrooms are designed and organized from a pedagogical perspective. When used as an effective tool, learning can occur immediately with limitless possibilities for exploration (Burden, 2013).

Julie Coiro posits:

> Today the definition of literacy has expanded from traditional notions of reading and writing to include the ability to learn, comprehend, and interact with technology in a meaningful way. Electronic texts introduce new support as well as challenges that can have a great impact on an individual's ability to comprehend what he or she reads (2003, p. 1).

Research related to increasing reading achievement through the use of multimodal technology, however, is mixed. Ertem (2010) and Zucker (2009) suggested increases with comprehension while utilizing multimodal devices. Sheppard's (2011) study of reading with iPad technology, however, disputes such a claim. This study compared two groups of male middle school students each assigned with reading the same book. One group of students read the text utilizing the print format and the other as an e-book via an iPad. Comprehension assessments did not detail any difference between the two groups, but there was, however, increased positive attitude within the e-book group as evidenced through attitudinal survey data. Retter, Anderson, and Kieran's (2013) action research further examined the impact of iPad technology with high school special education students who were identified as struggling readers. Through the use of iPad technology, each student was exposed to four specific educational apps for 30 minutes per day aimed at improving their vocabulary skills. Comparison data for each students' reading abilities before the iPad initiative demonstrated significant gains in vocabulary achievement as showcased through the Standard Reading Diagnostic Test. Conversely, Rose (2011) noted an increase in comprehension (as evidenced by comprehension questions as compared to a group who read the same text in a print-based format) for those students who utilized annotations along with their e-reading. As such, it is possible that the device itself may not serve as a means of increasing comprehension within learners, but rather the capabilities it possesses.

The ability to self-direct a student's learning in addition to the ease and portability of such multimodal devices are all reasons why attitude toward e-reading appears to be more positive than with print texts (Barck, 2010; Bormann & Lowe, 2008; Ciampa, 2014; Harland, 2010; Harmon, 2011; Landbrook, 2009; Maynard, 2010; Tees, 2010; Tualla, 2011). Boran (2011) noted that motivation with writing increased with tablet technology due to the ease of

editing and writing. This motivation can be seen when students are supported in online composition processes through the creation of classroom blogs as opposed to traditional handwritten print-based work (Maninger, 2006).

The possibilities for multimodal tablets are promising with a wide variety of easily accessible and downloadable book titles, (Farriter, 2008; Harland, 2010; Henderson, 2009; Larson, 2010; Tees, 2010), an eye-pleasing reading surface (Bormann & Lowe, 2010; Harland, 2010; Henderson, 2009), and cost-saving benefits of its eco-friendly design (Henderson, 2009; Young, 2009). Additional benefits to parents, teachers, and students include efficient communication opportunities, and readily available access to grades and lesson plans (Foote, 2012).

Many schools and school districts, however, are still hesitant to introduce such a technology. While the cost of the device itself is often affordable, the networking infrastructure and bulk-purchasing of Apps can easily exhaust a school's budget (Waters, 2010). As such, more affluent schools and districts tend to be earlier adopters of such new technologies (Newman, 2010). Over time, affordability may improve and more schools may be able to obtain such technologies.

Challenges. Technology integration does not occur without challenges. As such, those challenges reflected in the literature for both teachers, teacher leaders, and policy makers are enumerated in the two sections below.

Leadership and Policy. Lim and Khine (2006) posit that teacher leaders can sometimes overlook challenges impacting teachers' abilities to effectively integrate technology into their classrooms. Additionally, while policies created by educational leaders and stakeholders can often create clarity and consistency amongst stakeholders (ISTE, 2010), there can sometimes be

confusion amongst teachers if such information is not communicated clearly from the top down (Franklin, 2007). To prevent this disconnect, The Revolutionizing Education through Technology Report by the International Society for Technology in Education (ISTE, 2010) discusses the importance of clarity in technology policy which can support educational leaders as they attempt to implement various strategies to support learning. Rochelle (2000) further emphasizes the need for being selective and deliberate with technology policy as part of a broad educational reform to improve teacher practice, curriculum, and assessment overall.

The ISTE Project (2010) posited that informed and concerned leadership is a key component to the success of any technology leadership initiative. As such, appropriate professional development is critical to the development of teachers' and teacher leaders' technological skills.

Teachers. Three main areas of concern for teachers aiming to integrate more technology into their curriculum: time, access, and development of skills and professional development (Gay, 1997; Liu & Huang, 2005; Pierce & Ball, 2009). Before teachers can begin to effectively integrate technology into their teaching practice, they must first experience the foundational stages of integration and grow from novice learner to teacher facilitator of student technology use (Cennamo, Ross, & Ertmer, 2010). Smaldino, Lowther, & Russell (2012) further expounded upon this idea by positing the four-phase process of such growth as:

1. Dappling in technology—during this phase, technology is randomly added to existing curriculum simply to experiment. Students are given the option of typing their notes to see which method they prefer.
2. Old things old ways—during this stage, technology helps to support previous teaching methods. A teacher may type their lesson plans rather than writing them by

hand. In this way, teaching and learning do not change because of the presence of the technology.

3. Old things new ways—during this phase students are encouraged to support their typical learning with technology. This may occur through students typing their notes.
4. Doing new things in new ways—during this final stage, students use technology to extent their learning in new and innovative ways (p. 12).

Unfortunately, current research indicates that most teaching that is being supported by multimodal technologies, does not exceed the lowest ranking levels of the integration continuum (Baum & Walter, 2011; Hutchinson & Reinking, 2011; Murray & Olsese, 2011). Focusing on the educational Apps being utilized within multimodal tablets in secondary schools, Murray & Olsese (2011) assessed that most focus on specific pieces of content knowledge and did not allow for creativity or higher order thinking. It appears as though most use of multimodal tablet occurs simply as a means of replacing print-based texts. With increased research and professional development, however, teachers can become accommodated to using all of the features and functions afforded within multimodal tablet technology.

When high quality teaching utilizes such technology, the results can be staggering. Multi-sensory learning has long been established as an effective means of facilitating reading (Jewitt & Kress, 2003; Kress, 2010; Walsh, 2010). Consequently, one area that is particularly promising for multimodal tablets in education is the effect of touch technology on active literacy learning. Simpson, Walsh, & Roswell's (2013) mixed methods study found that the bidirectional exchanges (between the user and the device) touch technology afforded resulted in multidirectional, across platforms, reading paths for students. First discussed by Snyder (1997)

while discussing hyperlinks within computers, the nonlinearity afforded by such touch technology leads the reader to endless self-exploration and discovery through the Internet.

Teacher growth is often supported within a school system through the use of professional development. Professional development, sometimes known as in-service training, is when a school district or diocese provides direct training for its teachers. Martin and Strother (2010) indicate that when professional development was highly linked to course content, student achievement increased. Current professional development, however, tends to be more connected to provided background into specific devices rather than supporting teachers' desires to authentically and meaningfully integrate it into their curriculum (Harris & Hofer, 2011). Such meaningful integration can support students by providing opportunities for social interaction, collaboration, and personal reflection (Jonassen, Peck, & Wilson, 1999).

Summary

Chapter two of this dissertation has provided background information about the various educational policies that have contributed to the current state of education in Florida. I have also enumerated about the dual frameworks of Louise Rosenblatt's Transactional/ Reader Response Theory and Albert Bandura's Social Cognitive Theory, which helped me situate this research. Finally, I discussed the evolution from literacy to literacies and subsequent research to demonstrate multimodalities in today's secondary school systems. Chapter Three will provide background regarding the methods utilized within this dissertation.

CHAPTER THREE:

METHODOLOGICAL FRAMEWORK

The overall purpose of this study was to examine the use of multimodal tablets and their use in three High School English classrooms through the lens of three distinct teachers, each at various points in their teaching careers. Through this dissertation study, I have gleaned a better understanding of teachers' perceptions of multimodal tablet use in their classrooms and how the devices impact instruction. Furthermore, I have a deeper understanding of how information specific to multimodal tablets should be used in the High School English classrooms is disseminated to teachers from superiors and expert others. Based on these findings, the path of inquiry as part of an interpretivist design was followed. Chapter Three consists of information related to the research design, participants, setting, and nature of the data collection methods. Furthermore, this chapter also addresses the specific data pieces and descriptive information related to data analysis.

Research Questions

The following section provides background and descriptive information related to the methods for developing this study and methods for disaggregating the data. Through the implementation of a qualitative exploratory case study design, the following research questions guided this inquiry:

1. What are three literacy educators' perceptions of a multimodal tablet initiative at a Catholic High School?

2. How is information regarding the use of iPad technology for literacy disseminated to three High School English teachers within a Catholic School system?

Rationale

To provide a detailed, rich, and triangulated understanding of the influence of multimodal tablet technology, the following pieces of data were collected:

1. Interview- Interview data from three High School English teachers was collected. Each of the three selected teachers were representative of various stages in their professional careers in addition various levels of student ability within their classroom population.
    a. Teacher One: English II (College Prep) with 5 years teaching experience
    b. Teacher Two: English I (Honors) with 1 one year of teaching experience
    c. Teacher Three: English I (Remedial English with a Reading emphasis) with 30 years teaching experience
2. Artifact data: Artifact data included email correspondences, state, diocesan-based, and school-based documents related to technology utilization and implementation, school-based evaluative tools, memos, and supplementary materials from professional development seminars. Artifact data were analyzed through ethnographic content analysis.
3. Observational data- Observational data was collected from each of the three participants in their unique teaching environments.
4. Reflective Field Notes- Personal notes detailing my experiences as thoughts as the research study progresses.

Case study research is a research:

> approach in which the investigator explores a bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information (e.g., observations, interviews, audiovisual material, and documents and reports) and reports a case description and case-based themes (Creswell, 2007, p. 73).

Creswell (2009) and Merriam (1998) each posit that all methods of data collection may be used within case study analysis.

This study examined three bounded cases during a single academic year. Because participants will reflect three distinctly unique areas of literacy leadership, this case study analysis will employ a collective case study approach. The purpose of this design is to describe the uniqueness of each case, while still allowing for analysis of themes across all cases. Stake (2003) has identified three distinct types of case studies:

1. The instrumental case study- the researcher focuses on an issue or concern and selects one bounded case to illustrate the issue.
2. The collective case study- the researcher focuses on one issue or concern and selects multiple case studies to illustrate the issue
3. The intrinsic case- the researcher aims to develop a more substantial understanding of a particular case.

Following a single theme (Stake, 1995), a collective case study of three individuals was utilized to make a determination about the similarities and differences participants demonstrate with respect a single issue. Stake (2003) notes the value associated with analyzing multiple cases for the purpose of comparison. This adds power to my study by allowing me to examine similar and dissimilar results across all cases (Yin, 2013).

The primary participants include three High School English teachers. Secondary participants included one high school principal, one high school assistant principal, two high school technology leadership team members, and one high school department head. Secondary participants were selected after being mentioned by one or more primary participants as being a person of influence with respect to their integration of multimodal tablet technology. All participants were from the same school and data was collected during one-three month period. Comparisons were drawn from the resulting interviews, collected artifacts, observations, and researcher notes. Since this study utilized multiple cases, the final analysis includes narratives for each case in addition to a section for a cross-case analysis. The overarching goal for analysis was to identify issues within each case and then purposefully examine the themes that commonly transcend the cases (Yin, 2013).

The unit of analysis for each individual case was the use of the multimodal tablet in the secondary English classroom, but the framing and bounding was flexible to allow for exploration as interviews and observations progressed. This flexibility allowed me to explore and describe the various contexts in which the devices were utilized in addition to developing meaningful interview questions as the study progressed. Primarily, this study examined the perspectives of each of the three teachers, but outside data was collected and analyzed based on the responses and observations I collected as the study evolved.

Research Perspective

The research perspective that has guided this inquiry is Interpretivism. The use of this perspective has allowed me to authentically interact with and learn from my data as it emerged organically. Rather than denying my own presence as a researcher, an interpretivist stance has guided me to authentic understanding of my data as it was collected.

Interpretivism. Interpretivism, derived historically from the term 'hermeneutics,' helps to guide scholars as they interpret content around them (Crotty, 2010, p. 87). This perspective posits "an understanding of the text that is deeper or goes further than the author's own understanding" and that the writing process "has the potential to uncover meanings and intentions that are . . . hidden in the text" (Crotty, 2010, p. 91). Because of this deep and meaningful interaction with data, researchers are thus able to discover meaning in ways that would have been otherwise impossible.

Participants

Primary Participants. My primary participants consisted of three high school English teachers from a single large Catholic diocese. In an effort to identify common patterns within great variation between each of the three cases, the case study component of this piece of research utilized maximum variation sampling (Patton, 1990) for selecting interview participants. Patton (1990) defines maximum variation sampling as, "purposeful sampling [that] aims at capturing and describing the central themes or principal outcomes that cut across a great deal of participant or program variation" (p. 172). Maximum variation sampling (Patton, 1990) yields, "high-quality, detailed descriptions of each case, which are useful for documenting uniqueness and important shared patterns that cut across cases and derive their significance from having emerged out of heterogeneity" (p. 172).

Within a Catholic diocese, a single high school was selected due to its focused attention on technology integration through the use of a multimodal tablet initiative using iPads. This study was conducted during the initiative's first year of implementation. During this first year of implementation, iPads were provided to all teachers and staff on campus as well as Freshman and Sophomore students. The school's technology plan provided that for the next two

consecutive years, each incoming freshman class would receive an iPad. Thus, by year three, the entire school would be utilizing iPads within every class offered at Technology High School. Participants were purposefully sampled from those literacy educators who were employed within the Catholic diocesan school selected for this study. I contacted those teachers who were utilizing the multimodal tablet devices in their classroom and asked if they were willing to participate in the study. All three agreed to participate.

The case study design for this dissertation began with three (n=3) participants reflecting three unique points in the teaching career for each (see Table 3.1). Additionally, each participant's student population was unique as it was defined by the school administration and course coding. Due to issues of feasibility, an initial population of three teachers (n=3) was selected. I believe this number allowed me the ability to collect meaningful data and, ultimately, substantial findings. Kvale and Brinkman (2009) assert that the number of participants within an interview study must be determined based on the goals of a given study.

Table 3.1. Description of Primary Participants.

Teacher	Content Area	Teaching Assignment	Years of Experience
Lola	English	10th On-level	5
Aura	English	9th Honors	1
Isabelle	English	9th Remedial	30

Isabelle. Isabelle (all names in this study are pseudonyms) is a 60-year-old former Catholic nun and Remedial English I with Reading emphasis teacher. She has 30 years teaching experience and prided herself on her ability to advocate for students with special needs. Isabelle

often displayed her uneasiness with technology, and considered herself to be a novice, but made efforts to improve her proficiency by independently enrolling in (and paying for) online courses during summer and winter breaks from school. Isabelle continuously displayed an interest in learning how to improve her craft. On a daily basis she would search the internet for new Apps and ideas to enhance her curriculum, but rarely showcased the confidence to utilize them with her students. Before being assigned her own English classroom, Isabelle was a Special Education teacher and Reading Specialist who was placed back in the classroom when there was a need for a more qualified teacher to instruct students who were performing below grade level in English and Reading. In addition to the August-May academic calendar, Isabelle would also teach students over the summer to better prepare them for the demands of the upcoming year. During her free periods, Isabelle would work individually with students in their content courses to assist them with reading strategies. Additionally, she would proctor exams for those Special Education students enrolled in Advanced Placement courses.

Lola. Lola is a 30-year old English II (College Prep) teacher with 5 years teaching experience. She was enrolled in an online graduate program working to earn her Master of Science in Educational Leadership while this study was being conducted. Previously, she earned a Bachelor of Arts in Humanities and a Master of Arts in English. At the end of the academic year studied, she was promoted to the head of the English department. She worked diligently to utilize the multimodal tablets in her classroom daily and considered herself to be an extremely proficient consumer of technology. She prided herself on the fact that she was one of the first teachers in the school to utilize an iPad as part of her instruction. While other teachers, as she shared, would utilize more traditional approaches to teaching and learning, she frequently sought out ways to make her classroom more exciting and relevant to her students. She even went so far

as to calculate the number of minutes wasted daily utilizing traditional paper and pencil formats for tasks such as taking attendance, grading,, and recording data on her students as a means for justifying the personal purchase of an iPad to her husband. In addition the use of iPads in her classroom prior to the onset of the initiative, she was also one of the first teachers in the school to utilize an Apple TV. Lola could be described as an energetic and fun teacher with whom all of her students had great respect for and wanted to spend time learning from.

Aura. Aura is a 22-year old English I Honors teacher with one prior year of teaching experience. Aura is a recent graduate of a prestigious teacher preparation program in the Northeast. In exchange for her tuition being paid for, she agreed to work as a teacher for three years at the school examined for this study for a small stipend and housing. During the summers, she returns to her university for additional training and support to prepare for the following year. She commented frequently that her university peers and professors were the people she felt were more influential and knowledgeable with respect to guiding her teaching practice (particularly with technology). She is a native consumer of technology and, while she felt comfortable utilizing technology personally, was still unsure about its presence in her classroom. While she utilizes iPad technology each day in her classroom, she says she feels more comfortable interacting with her phone or computer. She feels the iPad is a strange "in-between" that she is still becoming accustomed to. After completing her current 3-year teaching contract, she hopes to begin transitioning into her dream job, teaching at an all-girls boarding school as she, coming from a very affluent background, attended herself as a young girl. Aura's classroom was fast-paced and fun and her students were able to relate to her on a personal level.

Secondary Participants. The secondary participants provided me with additional data. I interviewed five of the school's leadership members once for a period lasting one hour. I met

with each of the leadership members in their offices as this was both convenient and comfortable for them. Each of the five leadership members were selected based on the fact that they were mentioned by one or more of the primary participants as being influential in her integration of the multimodal tablet technology. The protocol utilized was informed based on the thematic analysis of Interviews 1 and 2 from the primary participants. All five leadership members consented to participate in this study and no other participants were recruited. Figure 3.1 represents the leadership participants' hierarchy within the school studied.

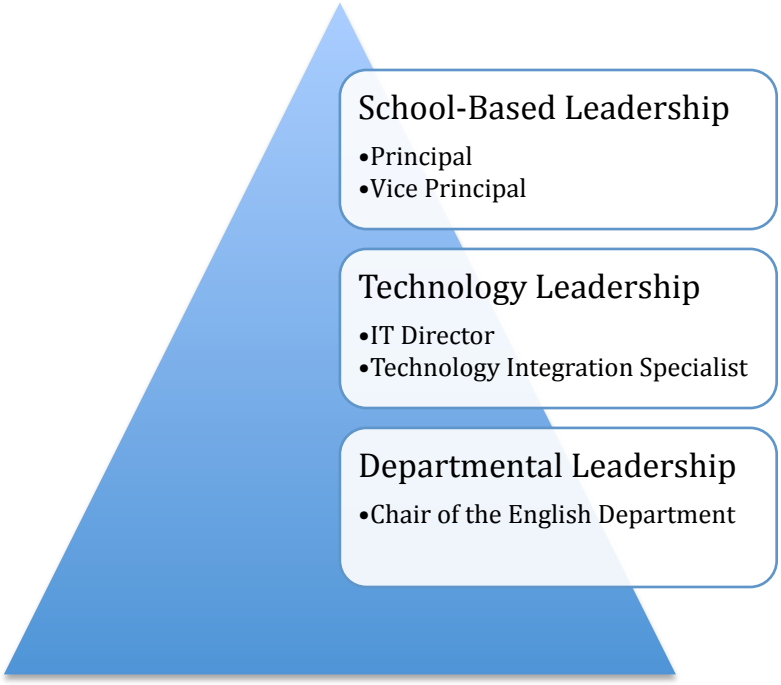


Figure 3.1. Leadership Pyramid.

Inclusion/ Exclusion Criteria. Participants were selected from a single Catholic diocese. The school selected for inclusion had a multimodal tablet initiative already in place and all three teacher-participants were selected from the same school and same department—English. Following the selection of a school, I observed each teacher in the English department to glean how the multimodal tablet technology was being utilized. Those teachers who focused their

instruction on technology integration were recruited to participate in this study. To participate in the study, the individual school and diocese first agreed through a formal approval process. Furthermore, each participant also provided individual informed consent.

Role of the Researcher. At the time that I conducted this qualitative case study, I was a full-time doctoral student at the University of South Florida. As a former high school English teacher and department head, I came to learn more about myself and as a teacher, teacher leader, researcher and scholar. As a reflexive researcher, I reflected on my research practices and findings throughout the duration of the study and data analysis.

Within this study, I served as an observer, interviewer, and writer. During the three-month period of data collection, I observed each of the three primary teacher participants daily, interviewed each of them twice, and then interviewed five leadership members they described as being significant once. I also collected artifact data throughout and wrote reflectively about what I was observing and learning. My researcher journal and notes allowed me to unpack my own thoughts and biases and eventually analyze the data through multiple lenses.

Data Collection Methods

General Data Collection Methods. Data was collected over a twelve-week period. I observed each teacher four-five days per week during a single 50-minute class period in which the multimodal tablets (iPads) were in use as per the school's technology initiative. In total, I observed each teacher for approximately 45 hours and collected two additional hours of interview data (lasting one hour each). I observed each teacher during the same class period each day although the time of day varied as the school's schedule rotated. Observing each teacher during the same class period each day provided consistency for how she interacted with the students, the multimodal tablet, as well as how the content developed over time. During these

observations, I sat in the back of the classroom and quietly took field notes on my computer. I collected any handouts that were provided to the students (digital or paper copy) and asked permission to capture student work when I deemed it to be appropriate. My field notes focused on how each teacher was utilizing the iPad, events of the classroom, and how the students responded. I also noted my personal reactions and thoughts to the events I was witnessing.

To increase transferability (Lincoln & Guba, 1985), scheduled interviews provided a second source of data for this study. I interviewed each teacher twice during the collection time period—once at the beginning of the study and once at the end. Each interview was semi-structured and followed a set of protocol questions. Protocol questions for interview one were established prior to the onset of the study and protocol questions for interview two were developed as a result of the responses disclosed during interview one in addition to other collected data pieces (observations, artifacts, researcher reflections)..

As relevant data presented itself, the path of dissemination was followed inductively and further interviews (and subsequent documents analyses) with five secondary participants occurred. This path ultimately yielded a group of participants whose presence, according to the three teacher participants, impacted her integration of multimodal tablet technology. The secondary participants included:

1. One department chair
2. Two school-based administrators (Principal and Vice Principal of Curriculum)
3. Two school-based technology specialists

Interview

Qualitative interviews represent "conversations in which a researcher gently guides a conversational partner in an extended dialogue" (Rubin & Rubin, 2012, p. 4). Participants in

qualitative interviews are free to respond as they wish and provide as much detail and background as they are comfortable with. A benefit of a qualitative interview is that, unlike a fixed survey, questions may be modified to match the knowledge, experience, or comfort level of the participant (Rubin & Rubin, 2012).

Development. The purpose of interviewing is to:

> find out what is in and on someone else's mind. The purpose of open-ended interviewing is not to put ideas in someone's mind (for example, the interviewer's preconceived categories for organizing the world) but to access the perspective of the person being interviewed (Patton, 1990, p. 278).

Questions utilized within the interview component of this dissertation were thoughtfully and carefully developed. The questions utilized within this study were designed to probe, but not lead the participants, in an effort to garner honest and authentic responses. Patton (1990) identifies three approaches to collecting data through the use of open-ended interviews. These three approaches include:

1. The informal conversational interview—relies entirely on the spontaneous generation of questions in the natural flow of an interaction, typically an interview that occurs as part of ongoing participant observation fieldwork
2. The general interview guide approach—involves outlining a set of issues that are to be explored with each respondent before interviewing begins.
3. The standardized open-ended interview—consists of a set of questions carefully worded and arranged with the intention of taking each respondent through the same sequence and asking each respondent the same questions with essentially the same words (p. 280).

This study utilized the general interview guide format. Each of the three (n=3) teacher participants was interviewed two times. Subsequent participants who were not part of the initial classroom teacher population (n=3) were interviewed once. The number of interviews for each participant was selected in an effort to reach saturation of content. Each session was approximately one hour in length to afford time for depth of responses, but not subsequently demand an overwhelming amount of time away from the participants' duties within their academic position. Each interview was audio recorded and, following each meeting, transcribed and thematically coded and analyzed. Details for the process of thematically analyzing the interview data are expounded upon below. Themes were analyzed within each participant's individual sessions, across each session for all participants, and across the entire length of the study.

1st Interview: The purpose of the first interview was to focus on establishing inductive themes that connected to my research questions:

1. What are three literacy educators' perceptions of multimodal tablet usage in a Catholic High English Classroom?
2. How is information regarding the use of technology for literacy instruction disseminated to three High School English teachers within a Catholic School system?

Following this initial interview (see Appendix A for protocol), participant responses were coded and thematically organized. These inductive themes helped guide my questioning for my second interviews.

2nd Interview: The second interview (see Appendix B for protocol) was organized based on my inductive findings from the first interview, observations, artifacts collected thus far, and my reflective field notes. The coded and thematically organized themes helped frame the

questioning for this interview. Furthermore, the second interview allowed me to gather reflective data from each participant and reconnect with research questions one and two. This interview provided me with opportunities to revisit any questions that were not previously answered to appropriate saturation.

Setting. Each participant was interviewed in an isolated and quiet environment, free from as many distractions as possible. Participants were interviewed individually and information, responses, and observations from other participants were not shared. Each participant was interviewed at their classroom at a time convenient to their schedule. The onset of each interview included a 5-minute briefing period (Kvale & Brinkman, 2009, p. 128) in which I reviewed the purpose of the study, discussed the use of my audio recording device, provided an opportunity for the participant to ask any questions, and anything else pertinent at the time.

Analysis. Interpreting the data and, "analysis involve making sense out of what people have said, looking for patterns, putting together what is said in one place with what is said in another place, and integrating what different people have said." (Patton, 1990, p. 347). Following each meeting with each participant, I organized and transcribed the interview data. The transcriptions were kept in a secure location that only I had access to. Each interview response was reference coded and linked to its subsequent research question.

Kvale and Brinkmann (2009) discuss seven stages of interview inquiry. These stages include (Figure 3.2):

1. Thematizing- Formulating the purpose of the study
2. Designing- Planning the design of the study
3. Interviewing- Conducting the interviews

4. Transcribing- Preparing the interview material for analysis which includes transcribing oral speech to written text.
5. Analyzing- Deciding which modes of analysis are appropriate for the interviews.
6. Verifying- ascertaining the validity, reliability, and generalizability of the interview findings
7. Reporting- communicating findings (p. 102)

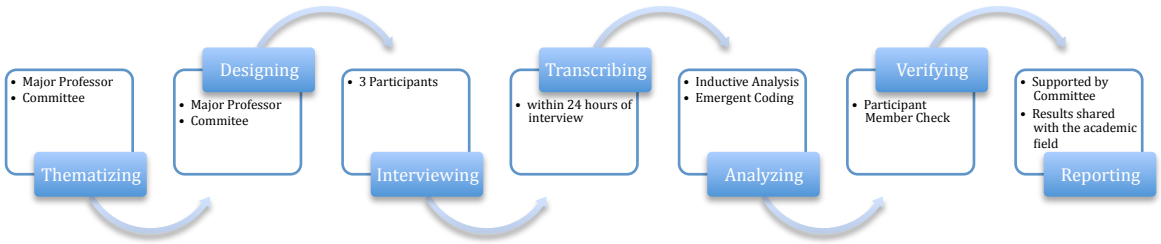


Figure 3.2. Development of Findings.

These seven stages were utilized to format the development of the design, structure, and analysis of the qualitative interview data. Thematizing and designing of the study occurred with the support of my committee members. Following receiving approval to begin my study, my committee approved my initial interview protocol (see Appendix B and C) and I began to conduct daily observations and interviews. Following each interview, I independently transcribed each interview and began to analyze the results (see below for expounded detail). Afterward, I member-checked the transcripts and results with each participant, and ultimately reported my findings back to my committee. Following approval from my committee, the findings of this study will be communicated back to the research field at large.

Transcription. Following each interview, I independently transcribed my data. Transcription allows for "the conversational interaction between two physically present persons . . . [to become] abstracted and fixed in a written form" (Kvale & Brinkmann, 2009, p. 177). This was done in an effort to preserve accuracy to develop a closer relationship with my data. Transcribing my own data prevented a gap in time for processing and helped me better prepare for the next set of interviews (Rubin & Rubin, 2012). Precise transcribing methods (Rubin & Rubin, 2012) were utilized to maintain accuracy. Stalling words, phonetic pronunciations (when appropriate), silences, pauses, and hesitations were included and noted as were any important gestures that contributed to the data. Any detail that could influence the interpretation of the data was noted and included to promote the highest level of accuracy.

Verification. After each interview had been transcribed, the analysis stage began. Utilizing inductive analysis (Hatch, 2002) allowed me to interpret the data so that the meaning emerged from the data collected as part of this study. I allowed the responses from each interview to guide my coding and subsequent analysis.

Analysis occurred through the use of multiple re-readings and an inductive system of coding. Following an initial reading, I reviewed and read each interview again. Utilizing a memo file (Rubin & Rubin, 2012), I noted any elements of the interview data that struck me or helped me connect back to one of my research questions. Following this reading, I composed a summary of the interview and noted which points struck me as most relevant to my research questions. My memo file and summary served as an informal set of notes that helped guide the next phase of my analysis

Next, utilizing my memo files, summaries, and transcripts, I began the process of formally analyzing, organizing, and coding my transcribed interview data. A code is a "distinct

label . . . [used] for each concept, theme, event, or topical marker" (Rubin & Rubin, 2012, p. 207). The first stage of analysis was recognition in which I reviewed my interviews and looked for markers related to my research questions and potential themes. Next, I read each interview again in an attempt to clarify any ideas and synthesize those ideas that appeared to be related. After this, I read the interview again to confirm my understanding and link those ideas that could now be integrated into new ideas—themes. After establishing my themes, I read each interview again and thematically coded the responses of each participant accordingly. In addition to thematic code, I also topically coded for ideas related to my research question.

Following this coding, I then sorted my results and grouped them accordingly. These coded groups allowed me to analyze within an individual interview, an individual participant, across all participants for a specific interview, and across all interviews for all participants. Sorting and analysis between and across all subgroups occurred as part of my final synthesis.

After the first interview, transcription, and analysis, I prepared follow-up questions. My analysis and re-readings helped guide my thinking about whether additional questions should be asked or if additional ideas should be explored further. Follow-up questions provided me with opportunities to obtain clarification for any participant responses that were not fully developed during the previous interview session. Follow-up questions helped me achieve a high level of completeness, thoroughness, and, ultimately help facilitate my goal of reaching saturation with each participant.

Reporting. Following the completion of my study and analysis, I reported my findings to my committee in a narrative form through the composition of my dissertation and during my dissertation defense. I utilized the strengths of my committee members along the way to facilitate interpretation issues that arose.

Observations

Field observations provide an opportunity for researchers to collect rich and meaningful data from participants in their most natural settings (Merriam, 1998). The additional data pieces resulting from my observations provided a new layer of understanding to my research and gave further credibility to those themes that emerged and substantiated my findings (Patton, 2002).

Development. Each of the three case study participants was observed throughout a collection period of twelve weeks. Observations provide an increased depth of understanding and new opportunities for triangulation. Following each observation session, researcher notes were organized and transcribed (when appropriate). Observations occurred 4-5 times per week during the collection period. The "…total amount of time spent collecting data in this way is a function of the problem being investigated" (Merriam, 1998, p. 121). Merriam (1998) posits a list of six key elements for researchers to focus on while collecting observational data. As such, each of these elements helped to guide my observational focus. I have elaborated on each element below.

1. The physical setting—I drew the layout of each space I conducted observations in and noted details about the physical space and its occupants.
2. The participants—I detailed each participant's behavior and demeanor as well as interactions with others that I observed. I also noted how the participant interacted with his or her environment.
3. Activities and interactions—I detailed any interactions that occurred while I was present include conversations, social norms, gestures, and anything else deemed appropriate.
4. Conversation—I noted as much verbal and nonverbal conversation as was possible.

5. Subtle Factors—I noted any unplanned activities or interactions that may go otherwise unnoticed.
6. The researcher's behavior—I noted how my presence impacted any activities or events I observed.

A researcher's membership can be classified into three unique categories:

1. Peripheral Member—observes daily or nearly daily and interactions with members is the most limited
2. Active Member—the researcher assumes a more central role in the setting that is in addition to the observations he or she is taking.
3. Complete Member—the researcher is completely immersed in the setting and actively participates (Adler & Adler, 1998).

Utilizing a "peripheral membership role" (Adler & Adler, 1998, pg. 85), I made every effort to be a careful observer who remained as invisible as possible, without directly interacting with the participants (central members) and their activities. My aim was to report on the activities of the classroom while disturbing the actions of the students or teacher as little as possible. This role was necessary because it allowed me to interpret my data from a more detached perspective.

My observation notes were organized in the format of a T-Chart (with the exception of physical space sketches. See Appendix C for example). The left side of the chart included a direct report of what I observed and the right side included my personal thoughts and wonderings. As a reflexive researcher, these notes helped me to connect with that I was seeing and what my beliefs and reactions were.

Analysis. I began the analysis process by reviewing my observation data several times within 24 hours of each observation. As I reviewed my notes a few times, I recorded notes detailing my reactions and those elements that seemed most appropriate to my research questions.

As each theme emerged to me, I coded them as I saw fit following the format of open-coding (Merriam, 1998). Following a period of intense review and open-coding, the process of analyzing my observational data began with the construction of categories. I continued to re-read my observational notes until I was able to organize my categories into relevant groups, axial coding (Corbin & Strauss, 2008). These groupings occurred as a result of the content or my personal reactions or reflections, whichever was most appropriate. Following this stage, several more re-readings occurred until a hierarchy of themes emerged to me. From this hierarchy, I utilized selective coding (Lichtman, 2014) to determine which details from the data were most relevant to my study.

My resulting group analyses were subsequently utilized to inform my coding and interpretation of the documents collected, as well as my reflective field notes, in an effort to effectively triangulate my findings.

Document

Documents are typically produced for reasons other than research, and can, therefore, help facilitate new levels of understanding for a given course of study. Documents represent easily accessible pieces of data that are not determinant on individual participants or social settings (Merriam, 1998). Goetz and LeCompte (1984) describe such pieces of data as "symbolic materials such as writing and signs and non-symbolic materials such as tools and furnishings" (p. 216).

Development. In an effort to truly understand the holistic experiences of each of the case study participants, as well as the context in which they were produced, I also examined all artifacts and documents related to the use of multimodal tablets in the secondary classroom. These artifacts included: e-mail correspondences, diocesan documentation, in-service documentation, professional development documentation, school-based trainings, diocesan-level trainings, and policy mandates. Anything that was available through public record or was provided to educators during the collection period of this dissertation was collected and assessed utilizing ethnographic content analysis. Examples of documents that are public record include: notices sent home to parents, memos, formal policy statements, newspaper or media coverage, and school board meeting minutes (Merriam, 1998). Such documentation provides insightful details that would otherwise be unknown to the researcher (Patton, 2002). To determine which documents should be included in this dissertation, I utilized the criteria set forth by Merriam (1998). She states that to be included and assessed a particular document must contain "information or insights relevant to the research question . . . [and] can be acquired in a reasonably practical yet systematic manner" (p. 153). As such, I made every effort to collect as many useful and appropriate documents as possible to further my understanding and triangulate my findings.

Analysis. I began the analysis process by reviewing the documents I had collected following each set of scheduled interviews. I reviewed each document within 24 hours following each interview in an attempt limit undue influence regarding my understanding of my participants' responses. Documents were reviewed in a systematic nature to promote consistency of content and interpretation. The organizational system that was utilized within this inquiry is enumerated in Figure 3.3. The system began with those documents that were most closely related

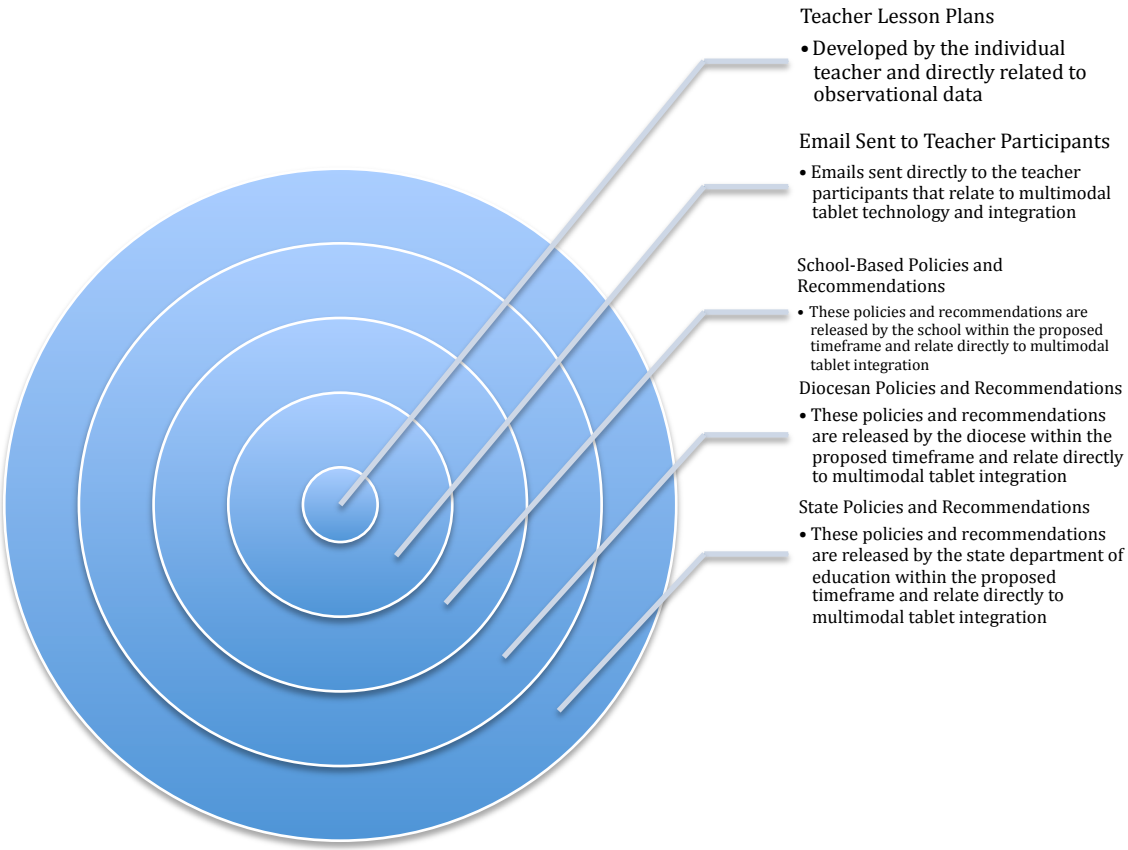


Figure 3.3. Systematic Review of Documentation.

to each participant (their personal lesson plans) and moved to those documents that were furthest removed (diocesan and state legislation released within the time frame being analyzed).

After I reviewed each document a few times, I recorded notes detailing my reactions and those elements that seemed most appropriate to my research questions. As themes emerged to me, I coded them as I saw fit following the format of open-coding (Merriam, 1998). Following a period of intense review and open-coding, the process of analyzing my observational data began with the construction of categories. I continued to re-read my observational notes until I was able to organize my categories into relevant groups, axial coding (Corbin & Strauss, 2008). These groupings occurred as a result of the content of my personal reactions or reflections, whichever

was most appropriate. Following this stage, several more re-readings occurred until a hierarchy of themes emerged to me. From this hierarchy, I utilized selective coding (Lichtman, 2014) to determine which details from the data were most relevant to my study.

My resulting group analyses was subsequently utilized to inform my coding and interpretation of the observational field notes as well as my reflective field notes in an effort to effectively triangulate my findings.

Reflective Field Notes

In addition to the abovementioned data points, I also kept a reflective journal detailing the events from my study as I remembered them. This journal included my reactions, reflections, and notes from each interview, observation, and interaction with all case study participants. My field notes were organized in a T-Chart format with my observations noted in the left column and my thoughts and reactions in the right column.

Data Summary

I began the analysis process by reviewing my reflective field notes several times within 24 hours of each observation. After I reviewed my notes a few times, I recorded notes detailing my reactions and those elements that seemed most appropriate to my research questions. As themes emerged to me, I coded them as I saw fit following the format of open-coding (Merriam, 1998). Following a period of intense review and open-coding, the process of analyzing my observational data began with the construction of categories. I continued to re-read my observational notes until I was able to organize my categories into relevant groups, axial coding (Corbin & Strauss, 2008). These groupings occurred as a result of the content or my personal reactions or reflections, whichever was most appropriate. Following this stage, several more re-readings occurred until a hierarchy of themes emerged to me. From this hierarchy, I utilized

selective coding (Lichtman, 2014) to determine which details from the data were most relevant to my study.

My resulting group analyses were subsequently utilized to inform my coding and interpretation of the documents collected as well as my observational field notes in an effort to effectively triangulate my findings.

Triangulation

Triangulation is a process of utilizing multiple sources of data in an effort to increase the credibility of research findings (Cresswell, 2009; Wolcott, 2005). This dissertation triangulated findings through the use of observations, interviews, documents, and reflective field notes (see Figure 3.4). Furthermore, the process was supported through the use of member checking (Merriam, 1998) in an effort to reduce any personal influence or bias that may have occurred. Following each interview, each participant was provided a copy of the transcribed data to review. Each participant then reviewed the transcripts to verify that they were accurate for both words provided and their subsequent intended meaning (Cresswell, 2009). The use of triangulation increases transferability (Guba & Lincoln, 1994) within and across each bounded case.

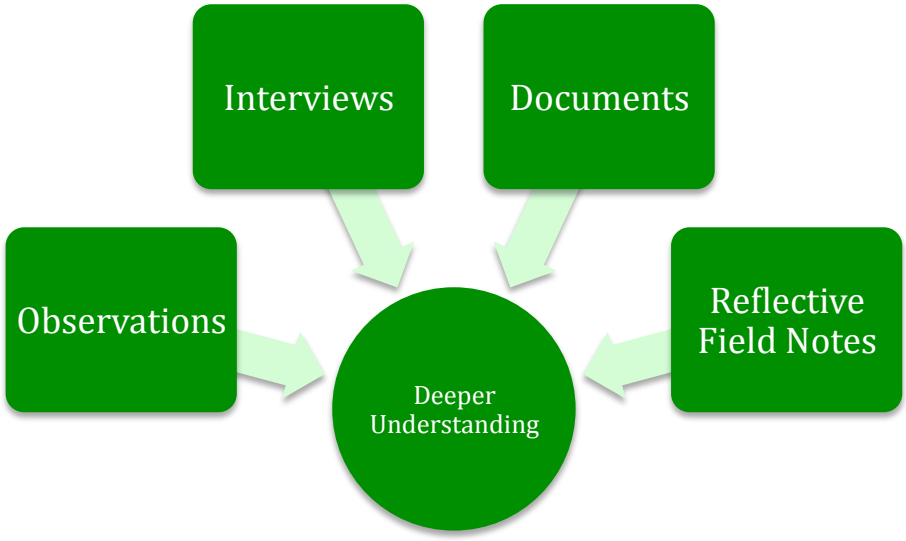


Figure 3.4. Triangulation of Data.

Themes Across Cases

The final stage in my analyses was to analyze across all cases. Multimodal tablet use with respect to established themes was assessed, building on the previously described process in order to increase my overall understanding. First I reviewed all the coded interview, field notes, and artifact data pieces across the primary participants. Next, I reviewed all the coded interview, field notes, and artifact data pieces across the secondary participants. Following that, I compared my codes and examined them for themes across all participants and tabulated the frequency of the codes included. After reviewing those themes with the highest frequency, I identified three main themes that emerged both within the primary participants and across all participants. Within each of the three main themes, sub-themes emerged as well. A description for

Theme One: Implementation of the Device. This theme provided insight into the ways in which the device was utilized, how participants defined classroom technology use, difficulties associated with the device, and a rationale for why the device was being utilized.

Theme Two: Evaluation. This theme provided insight into the tools and beliefs associated with evaluating how the device was being evaluated. Primary participants included descriptions of how they evaluated their own teaching practice with technology, while secondary participants were limited to descriptions of how they evaluate the multimodal tablet use of teachers. Further discussions within this theme include the frequency of evaluations, the tool utilized to conduct them, standards utilized, and the perceived expectations from the administration team.

Theme Three: Improving Current Practices and Moving Forward. This theme provided insight into the ways each participants viewed and interacted with professional

development, support available when experiencing difficulties, and goals for the future of the iPad initiative.

Collection Timeline

The collection timeline for this study was twelve weeks. This allowed sufficient time for the purposeful selection of participants, and to conduct interviews and observations, and collection of document data.

Ethical Considerations

Ethical issues related to those participating in this study were scrutinized and addressed according to the Human Research Protection Program at the University of South Florida. The privacy of each participant was respected and any identifiable information was kept in a secured location. A statement of confidentiality was included as part of the interview to convey an "an ethical commitment not to release results in a way that any individual's responses can be identified as their own" (Dillman, 2014, p. 163).

Summary

To summarize, this study utilized a qualitative case study approach to research in an effort to better understand three High School English teachers' perceptions of multimodal tablet usage and their subsequent classroom impact. Furthermore, I attempted to decipher the path of dissemination for content related to how these devices were being utilized and incorporated into instruction and literacy development. Three bounded cases were examined and analyzed through collected data that included: interviews, documents, observations, and reflective field notes.

CHAPTER FOUR:

FINDINGS

In this chapter, I discuss the important themes that emerged from my analysis. Data pieces collected within this study include observations, field notes, interview data, and artifact data. Chapter Four consists of my themes while Chapter Five contains my discussion and implications. This chapter focuses on the three themes that stemmed from this research study aiming to answer the following research questions:

1. What are three literacy educators' perceptions of a multimodal tablet initiative at a Catholic High School?
2. How is information regarding the use of iPad technology for literacy disseminated to three High School English teachers within a Catholic School system?

Themes emerging from my findings include:

Theme One: Implementation of the Device

This theme provides insight into the ways in which the device was utilized, how participants defined classroom technology use, unexpected outcomes associated with the device, and a rationale for why the device was being utilized.

Theme Two: Evaluation

This theme provides insight into the tools and beliefs associated with how each teacher's implementation of the device was evaluated. Primary participants included descriptions of how they evaluated their own teaching practice with technology, while secondary participants were

limited to descriptions of how they evaluate the multimodal tablet use of teachers. Further discussions within this theme include the frequency of evaluations, the tool utilized to conduct them, standards utilized, and the perceived expectations from the administration team.

Theme Three: Improving Current Practices and Moving Forward

This theme provided insight into the ways each participant viewed and interacted with professional development, support available when experiencing difficulties, and goals for the future of the iPad initiative.

This chapter is organized by the three abovementioned themes. Each participants' data is presented as it related to these themes to promote clarity and ease of reading.

General Data Collection Methods

Data was collected over a twelve-week period. I observed each teacher four to five days per week during a single 50-minute class period in which the multimodal tablets (iPads) were in use, as per the school's technology initiative. In total, I observed each teacher for approximately 45 hours, and collected two additional hours of interview data (lasting one hour each). I observed each teacher during the same class period each day although the time of day varied as the school's schedule rotated. Observing each teacher during the same class period each day provided consistency for how she interacted with the students, the multimodal tablet, as well as how the content developed over time. During these observations, I sat in the back of the classroom and quietly took field notes on my computer. I collected any handouts that were provided to the students (digital or paper copy) and asked permission to capture student work when I deemed it to be appropriate. My field notes focused on how each teacher was utilizing the iPad, events of the classroom, and how the students responded. I also noted my personal reactions and thoughts to the events I was witnessing.

To increase transferability (Lincoln & Guba, 1985), scheduled interviews provided a second source of data for this study. I interviewed each teacher twice during the collection time period—once at the beginning of the study and once at the end. Each interview was semi-structured and followed a set of protocol questions (see Appendix A and B). Protocol questions for interview one were established prior to the onset of the study and protocol questions for interview two were developed as a result of the responses disclosed during interview one in addition to other collected data pieces (observations, artifacts, researcher reflections).

Following each teacher interview, the path of dissemination was followed inductively and further interviews (and subsequent documents analyses) with five secondary participants occurred. This path ultimately yielded a group of participants whose presence, according to the three teacher participants, impacted her integration of multimodal tablet technology. The secondary participants included:

1. One department chair
2. Two school-based administrators (Principal and Vice Principal of Curriculum)
3. Two school-based technology specialists

Primary Participants

This case study focused primarily on three High School English teachers and their integration of iPad technology at a large Catholic High School. The three primary participants: Isabelle, Lola, and Aura are described below.

Isabelle. Isabelle (all names in this study are pseudonyms) is a 60 year old former Catholic nun and Remedial English I with Reading emphasis teacher. She has 30 years teaching experience and prided herself on her ability to advocate for students with special needs. Isabelle often displayed her uneasiness with technology, and considered herself to be a novice, but made

efforts to improve her proficiency by independently enrolling in (and paying for) online courses during summer and winter breaks from school. Isabelle continuously displayed an interest in learning how to improve her craft. On a daily basis she would search the internet for new Apps and ideas to enhance her curriculum, but rarely showcased the confidence to utilize them with her students. Before being assigned her own English classroom, Isabelle was a Special Education teacher and Reading Specialist who was placed back in the classroom when there was a need for a more qualified teacher to instruct students who were performing below grade level in English and Reading. In addition to the August-May academic calendar, Isabelle would also teach students over the summer to better prepare them for the demands of the upcoming year. During her free periods, Isabelle would work individually with students in their content courses to assist them with reading strategies. Additionally, she would proctor exams for those Special Education students enrolled in Advanced Placement courses.

Lola. Lola is a 30-year old English II (College Prep) teacher with 5 years teaching experience. She was enrolled in an online graduate program working to earn her Master of Science in Educational Leadership while this study was being conducted. Previously, she earned a Bachelor of Arts in Humanities and a Master of Arts in English. At the end of the academic year studied, she was promoted to the head of the English department. She worked diligently to utilize the multimodal tablets in her classroom daily and considered herself to be an extremely proficient consumer of technology. She prided herself on the fact that she was one of the first teachers in the school to utilize an iPad as part of her instruction. While other teachers, as she shared, would utilize more traditional approaches to teaching and learning, she frequently sought out ways to make her classroom more exciting and relevant to her students. She even went so far as to calculate the number of minutes wasted daily utilizing traditional paper and pencil formats

for tasks such as taking attendance, grading,, and recording data on her students as a means for justifying the personal purchase of an iPad to her husband. In addition the use of iPads in her classroom prior to the onset of the initiative, she was also one of the first teachers in the school to utilize an Apple TV. Lola could be described as an energetic and fun teacher with whom all of her students had great respect for and wanted to spend time learning from.

Aura. Aura is a 22-year old English I Honors teacher with one prior year of teaching experience. Aura is a recent graduate of a prestigious teacher preparation program in the Northeast. In exchange for her tuition being paid for, she agreed to work as a teacher for three years at the school examined for this study for a small stipend and housing. During the summers, she returns to her university for additional training and support to prepare for the following year. She commented frequently that her university peers and professors were the people she felt were more influential and knowledgeable with respect to guiding her teaching practice (particularly with technology). She is a native consumer of technology and, while she felt comfortable utilizing technology personally, was still unsure about its presence in her classroom. While she utilizes iPad technology each day in her classroom, she says she feels more comfortable interacting with her phone or computer. She feels the iPad is a strange "in-between" that she is still becoming accustomed to. After completing her current 3-year teaching contract, she hopes to begin transitioning into her dream job, teaching at an all-girls boarding school as she, coming from a very affluent background, attended herself as a young girl. Aura's classroom was fast-paced and fun and her students were able to relate to her on a personal level.

Setting: St. Patrick Catholic High School

The setting for this study was St. Patrick Catholic High School. A diocesan coeducational school located in an urban area in Central Florida, the school serves a total of 720 students. The

school has a total of 60 teachers and the average class size is 24 students. The cost of attendance is $11,540 per academic year. The iPad initiative was in its first year when this study was conducted. iPads were provided to all teachers and 9th and 10th grade students with the intention being that all grades would have the technology within 4 years. Current juniors and seniors would graduate without ever participating in the initiative, while future incoming students would receive them.

Theme One: Implementation of the Device

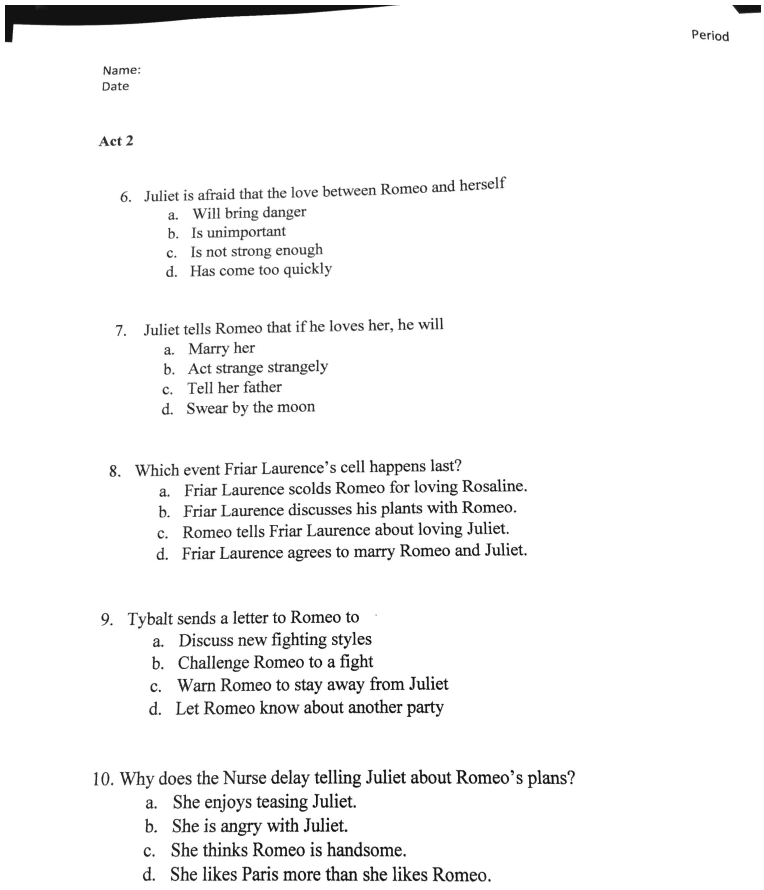
In the next section, I highlight the findings associated with the ways in which the iPad was implemented in the three classrooms I observed as well as each participant's personal definition and understanding of educational technology. Furthermore, I discuss each participant's rationale for utilizing the technology daily and the difficulties they have encountered with implementing multimodal tablets into their English classrooms.

Isabelle. In the next section I discuss how multimodal tablets are implemented in Isabelle's classroom as well as her rationale and motivation for including this technology as part of her daily instruction. Furthermore, I enumerate on Isabelle's personal understanding of what educational technology is and the difficulties associated with its use in her classroom.

Personal understanding of educational technology. Isabelle defined technology as "anything that is digital [or] media . . . that supplements what you're trying to do in the classroom." As a reading specialist who was placed in the classroom temporarily, she viewed her role as providing content and reading instruction to her students and utilizing iPad technology to support her efforts. She rated her technology abilities as "a little above beginner. . . with a long way to go" and described the school year as being difficult because she was asked to integrate the iPad technology into her classroom (per the technology mandate) but still didn't fully

understand many of the programs. Her journey, thus, allowed her to learn alongside the students. She believed strongly that the iPads should be used for "educational purposes only," but noted that not all teachers felt the same way. Many teachers, according to Isabelle, allowed students to play games and use the device for fun during off-time in class. Isabelle, however, would not knowingly allow this during her classes.

Daily uses and application. iPad technology was observed in Isabelle's classroom during every observation. Students utilized the technology to receive and respond to assignments (Figure 4-1 provides an example of a sample assignment Isabelle had her students complete on the iPad), complete assessments, and review their grades. Students would also view their readings in digital format on their iPads, which allowed them to easily move throughout the document, search for key terms, and locate information when questioned. Throughout this research study, the students read William Shakespeare's play, *Romeo and Juliet*. While the students' textbook was in digital form, the only multimodal capabilities available were a limited number of in-text hyperlinks. Isabelle, however, did not rely on them heavily because, as she described, there were difficulties associated with them. She shared, "I've found that when the kids try to connect to them, they don't always work."



Period

Name:
Date

Act 2

6. Juliet is afraid that the love between Romeo and herself
   a. Will bring danger
   b. Is unimportant
   c. Is not strong enough
   d. Has come too quickly

7. Juliet tells Romeo that if he loves her, he will
   a. Marry her
   b. Act strange strangely
   c. Tell her father
   d. Swear by the moon

8. Which event Friar Laurence's cell happens last?
   a. Friar Laurence scolds Romeo for loving Rosaline.
   b. Friar Laurence discusses his plants with Romeo.
   c. Romeo tells Friar Laurence about loving Juliet.
   d. Friar Laurence agrees to marry Romeo and Juliet.

9. Tybalt sends a letter to Romeo to
   a. Discuss new fighting styles
   b. Challenge Romeo to a fight
   c. Warn Romeo to stay away from Juliet
   d. Let Romeo know about another party

10. Why does the Nurse delay telling Juliet about Romeo's plans?
    a. She enjoys teasing Juliet.
    b. She is angry with Juliet.
    c. She thinks Romeo is handsome.
    d. She likes Paris more than she likes Romeo.

Figure 4.1. Sample Assignment from Isabelle.

Rationale for implementation. Isabelle cited her rationale for utilizing the iPad technology in her classroom as being because "we were told [by administration] that this is what we were doing." When questioned about whether she would be utilizing iPad technology if she was not participating in the school's technology initiative, she said "probably not to this extent." She often described a strong desire to please those in authoritative positions because she felt they implemented such policies out of the best interests of the school. If administration would ask her

to complete a task, she would always complete it. She viewed herself a team player that always followed suit when asked to do something by her administration team.

Unexpected Outcomes. The students in Isabelle's classroom utilized the iPad technology on a daily basis. While many positive elements resulted from its continuous use, Isabelle also highlighted (and my observations confirmed) several difficulties. The students were proficient in moving quickly and methodically from one App to another or moving from an assignment to a game (or other unauthorized activity). I observed students engaging in off-task behavior during every observation in Isabelle's classroom. Frequently this was displayed in the form of students working on their assigned work in one tab and quickly swiping to a game or website in another. With a simple swipe of their fingers, students could easily create the appearance of being on-task even though they were not participating in the assigned activity. Creating further difficulty, Isabelle would primarily remain at the front of the classroom facing her students. Since she was not able to view the screens (the students often held the tablets at an angle that pointed toward them prohibiting someone facing the opposite direction from viewing their online activities), she was often unaware that students were not participating in the activity she assigned. During four occasions, I observed students in the front row playing games without Isabelle's knowledge even though she was only a few feet away (See Figure 4.2 for a sample image of Isabelle's classroom layout).

Figure 4.2. Isabelle's Classroom.

Furthermore, the beginning of the school year proved to be a difficult transition for Isabelle. Moving from previous experiences with paper texts to a fully online curriculum, Isabelle discussed that it was "really tough because we had to teach the kids how to use the Apps that we put on their iPads" in addition to introducing the typical content of her course. She shared that, as the year progressed, however, her lack of knowledge with technology provided an opportunity for the empowerment and contribution of her students enumerating that "there are kids who will say, 'This is how you do it.' If you can share something with me, that's fine. I'm not saying I'm an expert in this and that. And that really makes [the students] feel 'Oh, I can share something,' you know."

Additional difficulties included problems associated with access, networking, and websites loading properly. A firewall on campus prohibited students from visiting websites deemed to be undesirable by the school's administration, but, once off-campus, students had

open access. In addition to visiting websites, many students would attempt (sometimes successfully) to download content that was prohibited by the school to their devices. Isabelle noted:

> We have security, so we can find out what they're downloading to their iPads because technically they are the school's [property] and sometimes what they will try to do when they go home is they will try and put in a password where they can go on websites that we don't allow on campus. But can find out, which we did last Friday, we found out, [by our server] that someone was trying to access a website [that is prohibited]. Other difficulties included students not being able to load websites she wanted them to visit even though the students were "typing in the web address exactly as listed.

and access to appropriate content [such as in the Science classes] being blocked because key terms flagged the school's security system thus prohibiting teachers and students from accessing the content.

Lola.

In the next section I discuss how multimodal tablets are implemented in Lola's classroom as well as her rationale and motivation for including this technology as part of her daily instruction. Furthermore, I enumerate on Lola's personal understanding of what educational technology is and the difficulties associated with its use in her classroom.

Personal understanding of educational technology. Lola defines technology as "a tool we use to make our lives easier or better. It doesn't have to be electronic, but it does have to be man-made in some way." In addition to her response during our interview, I observed Lola question her students about the purpose of technology and ask them to think critically about why it was used each day. She encouraged her students to engage in discourse about whether the

devices were a benefit or a detriment. An overwhelming majority of the students viewed the iPad devices as a benefit.

Lola utilized iPad technology daily in her classroom and her personal life. She was one of the first teachers at her school to utilize the technology in her classroom (beginning in 2011 with an iPad she purchased herself), and did so before the school's initiative began. Initially, she utilized iPad technology to conduct informal assessments and log notes on her students and their productivity. How she utilized the iPad technology during the collection period for this study is enumerated below.

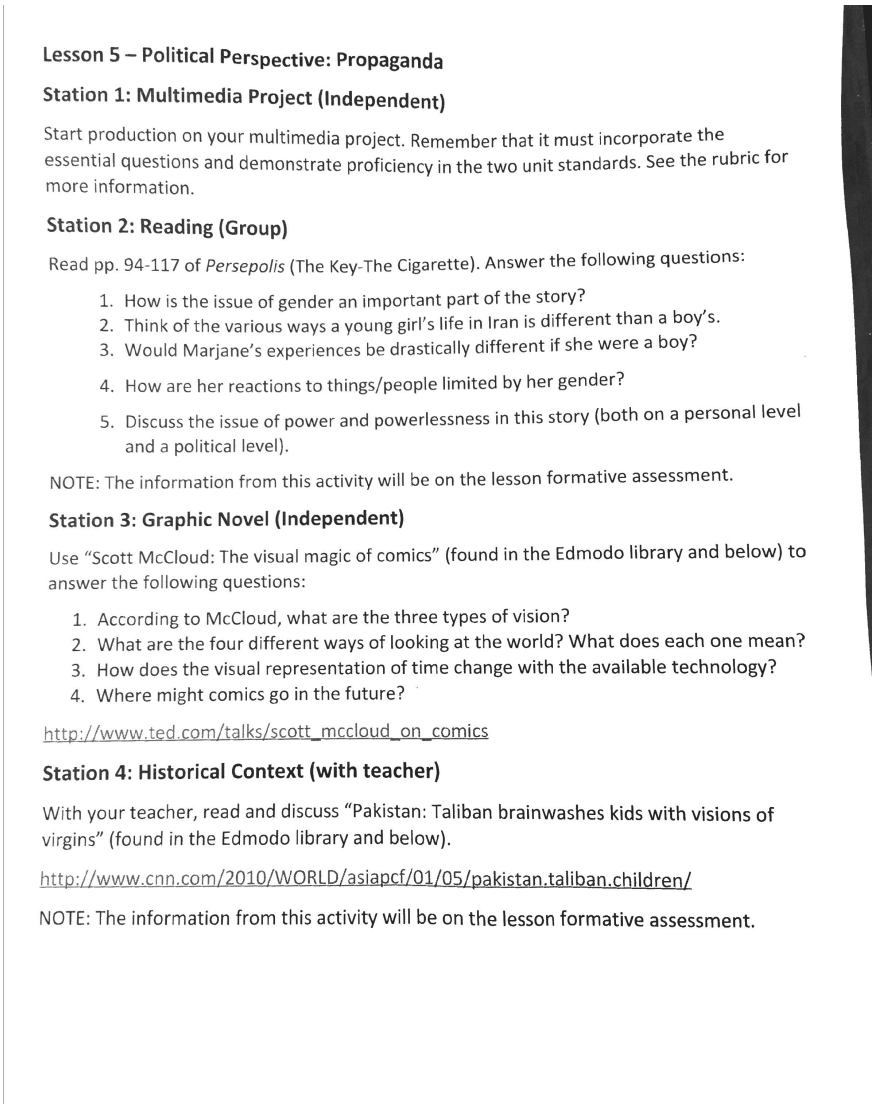
Daily uses and application. Lola utilized the iPad technology daily in her classroom. She described her use of the technology as including, "sending emails, using Edmodo, communicating with students to give them information or documents. . . mostly for communication purposes and to create products that I might use with my students too." Additionally, she would disseminate information electronically to her students via the iPad. She did sometimes wonder, however, whether paper copies of pertinent documents would be better received by her students. She described her own reactions to paper texts saying:

> Sometimes there will be some things, like a journal article, that I can read digitally. If it's something I need to get in depth with, I need a hard copy. And for some of our students, I think they feel the same way too, but I wonder if that's partially habit and so over time are we going to see a shift and adjust and sometimes we will hear people complain and say 'I hate the iPad. I don't want to read on it. I don't want to write on it. I don't want to be on it. I just want a book. A hard copy of the book.

Expounding on this, she highlighted that most of the negativity toward the iPad was coming from other teachers and not the students. She elaborated, "sometimes I think back to the old days

when they switched from scrolls to books. You would be the one complaining, 'I just want a scroll!' It's just the new way we are communicating with each other. In some situations, I'm completely comfortable with it, but in other situations, I'm not there yet." Lola did, however, have one student who routinely would not compose on her iPad. Instead, this student would compose on paper and then after she felt satisfied with her writings would type her text and submit electronically. This created additional work for the student and extended the amount of time required to complete assignments, but this was the process that felt most comfortable for the student.

Lola aimed to utilize the iPad to teach in a way that best met the needs of each individual student (See Figure 4.3 for an sample assignment from Lola's classroom).



Lesson 5 – Political Perspective: Propaganda

Station 1: Multimedia Project (Independent)

Start production on your multimedia project. Remember that it must incorporate the essential questions and demonstrate proficiency in the two unit standards. See the rubric for more information.

Station 2: Reading (Group)

Read pp. 94-117 of *Persepolis* (The Key-The Cigarette). Answer the following questions:

1. How is the issue of gender an important part of the story?
2. Think of the various ways a young girl's life in Iran is different than a boy's.
3. Would Marjane's experiences be drastically different if she were a boy?
4. How are her reactions to things/people limited by her gender?
5. Discuss the issue of power and powerlessness in this story (both on a personal level and a political level).

NOTE: The information from this activity will be on the lesson formative assessment.

Station 3: Graphic Novel (Independent)

Use "Scott McCloud: The visual magic of comics" (found in the Edmodo library and below) to answer the following questions:

1. According to McCloud, what are the three types of vision?
2. What are the four different ways of looking at the world? What does each one mean?
3. How does the visual representation of time change with the available technology?
4. Where might comics go in the future?

http://www.ted.com/talks/scott_mccloud_on_comics

Station 4: Historical Context (with teacher)

With your teacher, read and discuss "Pakistan: Taliban brainwashes kids with visions of virgins" (found in the Edmodo library and below).

http://www.cnn.com/2010/WORLD/asiapcf/01/05/pakistan.taliban.children/

NOTE: The information from this activity will be on the lesson formative assessment.

Figure 4.3. Sample Assignment from Lola

Supporting this, she mentioned:

> if we're using an iPad exactly the same way we would have used paper or a book, it's no different, why would they get excited about it? But if we're using this technology in a completely unique way, we're doing things with it that you couldn't do without, umm, that piece of technology, then I think that makes a difference.

She described the shift in her instructional practices since utilizing the iPads as part of the school's technology initiative, "At first it was definitely more of a replacement [for paper]. I'm trying to make it more authentic. I don't know how good of a job I'm doing because I haven't had a formal observation. I like to think that I'm getting there, though. I hope. I'm trying." Furthermore, Lola's process included:

> just sort of trying new things and trying to get the students to use the iPads in a way that they would naturally use them anyway. Just from watching them in class and seeing how they use the iPads, and, umm, and then just trying to structure everything we do in the classroom so it just flows naturally into what they would do anyway. They like to move between Apps. I'm doing this, but I'm also doing this at the same time. So trying to give them many things that they can do or different modes where they can utilize. They is so much, they can watch videos, you can read, listen to music, look at pictures, there are so many things they can do. Trying to give them resources so they can say, "ok, so watching the videos didn't really work for me, but reading this article and seeing this interactive timeline, that was me. The other one not so much." Kind of how I use technology. If I need to know something, I don't have the patience to watch a video. I don't like it, but I'll read and look at a diagram and that will help me. So trying to get them to better understand themselves too.

To best meet the needs of her students, Lola would always allow her students to compose or submit in whatever way they felt most comfortable. She wanted them to be able to authentically "express themselves . . . and not feel hindered or disabled (Figure 4.4 illustrates an authentic submission from a student utilizing a Comic Strip App). Many students find [iPads]

liberating because they hate their handwriting. They feel much more comfortable typing than writing. So for some students it's a blessing and for some it's a total detriment."

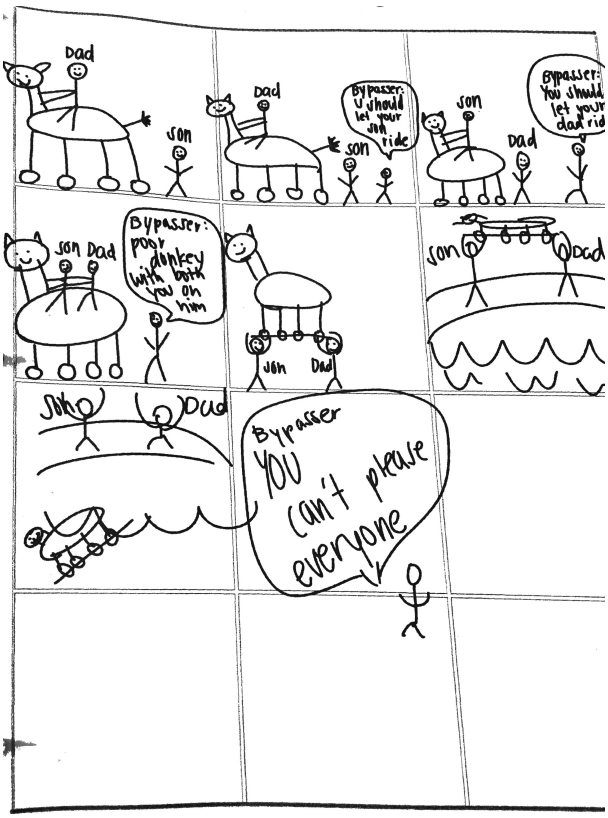


Figure 4.4. Comic Strip Authentic Submission.

Rationale for implementation. Lola integrated technology in her classroom, because she had a strong desire to promote what she felt was best practice. She felt strongly that her particular approach to teaching enabled student learning to be enhanced by the technology utilized. She did not aim to merely create a paperless environment, but one that was enriched through the capabilities of the iPad. Lola told me, "I've educated myself, and I subscribe to an English journal, and I learn and try to make myself better and, umm, and I think a lot of people don't do it that way. Sort of wait for someone to say 'You have to do this.'"

Why this was being promoted as a school-wide initiative, however, was something she was much less clear about. She stated, "I'm not really sure where this started. If this was the diocese that kind of instigated this or not, ummm, I'm not really sure where this came from, personally. I have no idea. I probably should, but I don't."

Unexpected outcomes. Several difficulties associated with iPad technology were noted as part of her classroom experience. She articulated problems associated with downloads and Apps stating, "They can buy Apps themselves, they can download. Some are blocked. They are quicker than we are. The new cool game, we won't know it's the new cool game until 3 weeks later and by then it's not cool anymore, so what's the point?" I observed students playing games during every scheduled observation with Lola. Students were able to access and download those games that they found appealing, regardless of the school's policies against them. Lola made a conscious effort to monitor students and their work progress, but the students were often able to move so quickly between applications (a single swipe of their fingers taking a fraction of a second could hide any evidence of unauthorized play during classroom time) that she had no idea they were not on-task. Lola often moved around the room displaying close proximity to all of her students. Students were aware that she was watching them and looking for off-task behavior, but developed new skills to evade her knowledge and adapt to the iPad driven classroom. She stated:

> I think the iPads can make it easier for students to hide, ummm, it's not as though, in the olden days you could walk around and you could see visually who was on task and who was not. An iPad student may look on task, but they're actually not. Umm, so it is, I guess looking for new cues, so that's been difficult, trying to determine the cues for when a student is off task. So gestures can indicate if a student is off task. So that's been tough. But then again, I wonder if it's my job to police that? To a certain degree, yes, but also

> they need to be able to make their own decisions. If I had been in class 15 years ago drawing pictures in my notebook, some teachers might have stopped, but other teachers wouldn't have and honestly that was my way of trying to think things through, so, who am I to say that you- you're looking at something else, but you could be certainly attuned to what's happening in the room at the moment, even though it's not at this moment.

Aside from hindrances associated with students being distracted and downloading content not approved by the school, the "workflow is the biggest issue. How do you get it from there to me in a way that is organized and clear? Edmodo is great for most things, but it's not ideal. Google Docs is better or even Google Classroom, but then again there are some things that, umm, that if they're using a particular App it might not sync." I observed several students completing assignments in programs that could not be accepted by the platform *Edmodo* that was utilized by the school. Other times, students were unable to save their work in a way that could be submitted electronically, creating problems for Lola who always aimed to offer as much student choice as possible. She highlighted one such issue combined with student safety and parental approval describing:

> we are working on this whole unit about heritage. We're reading *Persepolis* and it's about this girl who lives in Iran and she writes about her culture so we had thought about, umm, you know wouldn't it be awesome to have them share their culture and heritage story and where they came from. We had thought about using Story Corp. NPR does it and the idea is that they have this truck that travels around the country and you go in the truck and it's usually 2 people and you interview each other and go back and forth and talk about something. And umm the purpose of the program is to preserve cultural history, ummmm, so we thought would be cool to have them record their stories like that. So

> Story Corp has an App that you can use and you can put in your interview questions, you can access them during the interview, you can record each other, it's great! The only problem is the only place you can store the data is in that App, so if I wanted to have them use the App, the only way I could see it would be if they used a particular hash tag so I could find them quickly and easily, then it's like- I don't know how comfortable parents would feel with kids sharing all this information out in public. And that's the other frustrating thing, having all this technology makes it so easy for them to do things, ummm, that are real world experiences, but then you also have to consider the safety. Like, how comfortable are people are going to be with sharing these sorts of things with the real world?

When Lola requested an AppleTV to use in her classroom (there were ten at the school not being used and sitting in the boxes), the Technology integration specialist wasn't sure she was ready to utilize additional technologies in her classroom and, as such, asked her to write out a rationale for why she needed one and what she planned to do with it. She responded by showcasing her desire to learn and experiment telling her, "Look, there are going to be a lot of challenges. I know we will run into problems, but challenge accepted. Whatever you can throw at me, I'll take it. We will figure it out."

While observing Lola's class, an incident occurred where one student AirDropped an inappropriate picture from his iPad and, thus, projected it for the entire class to see. AirDropping was one of the difficulties faced by many teachers at the school, as Lola told me, and one that she had not planned for in advance. Her response, however, was one in which she was able learn from and create a better plan for moving forward. "It made me realize that I hadn't set up clear expectations about how the iPads should be used. It's late, but let's set up expectations and

here's how we're doing it. Of course kids are distracted by their iPads, you can't do anything about that necessarily. I can't police them, as much as some people would like us to. You have to expect some level of distraction. I get distracted by it! Everyone does. It's just a natural thing to do. I've definitely become a lot more flexible with a lot of things as a result. I think that taking a positive approach is, well it was helpful for them too. It's not like I said "no more iPads ever." That's not going to happen and I know in some classes that was the case. The teachers would say, "you're not allowed to use iPads for x number of days."

Aura.

In the next section I discuss how multimodal tablets are implemented in Aura's classroom as well as her rationale and motivation for including this technology as part of her daily instruction. Furthermore, I enumerate on Aura's personal understanding of what educational technology is and the difficulties associated with its use in her classroom.

Personal understanding of educational technology. When questioned, Aura stated that she "consider[ed] technology to be the tools that you design to use to implement certain processes more efficiently. I think the main object is efficiency and I think they make processes happen more efficiently." In practice, she utilized technology to post lessons, assignments, reviews, assessments and grades. She also utilized the technology to post grades and respond back and forth to students, parents, and school leaders. What the iPad initiative looks like in her classroom was:

> a paperless classroom in terms of worksheets although we do tests on paper for confidentiality, I mean academic honesty, but it looks like using internet the class as a resource. It looks like them collaborating. It looks like them writing papers on Google drive so I can go in there and edit as they go, it looks like quick submissions back and

forth between us, and most of their, like materials, on an online textbook, or electronic textbook.

Daily uses and application. Aura utilized the iPad technology every day and during each observation. She described the paperless environment her classroom exists in stating, "We use them most every day. Every worksheet is on the iPad. Study guides for novels have all been on there, they submit things through Edmodo always, umm, we'll use it for, like, for research for when we need to look things up, whenever they're writing papers they're using the iPad. Pretty much everything we're doing is on there, but I want to get into more of like an authentic use of the iPad, not because we have to, but because of the wealth of options available on it." The programs witnessed daily included: Edmodo, Pages, and Notability, while a culminating *authentic* project involving iMovie was observed during the final week of scheduled observations. This activity allowed students to film themselves acting out scenes from Romeo and Juliet and creating an iMovie trailer (See Figure 4.5 for a still from one student's submission). During this time, the students were highly engaged and energetic about their participation in class. Students were eager to create and develop their trailers and students were observed coming in to class during other periods as well as during lunch to film and receive feedback from Aura. This type of enthusiasm was not observed during any other instructional time.

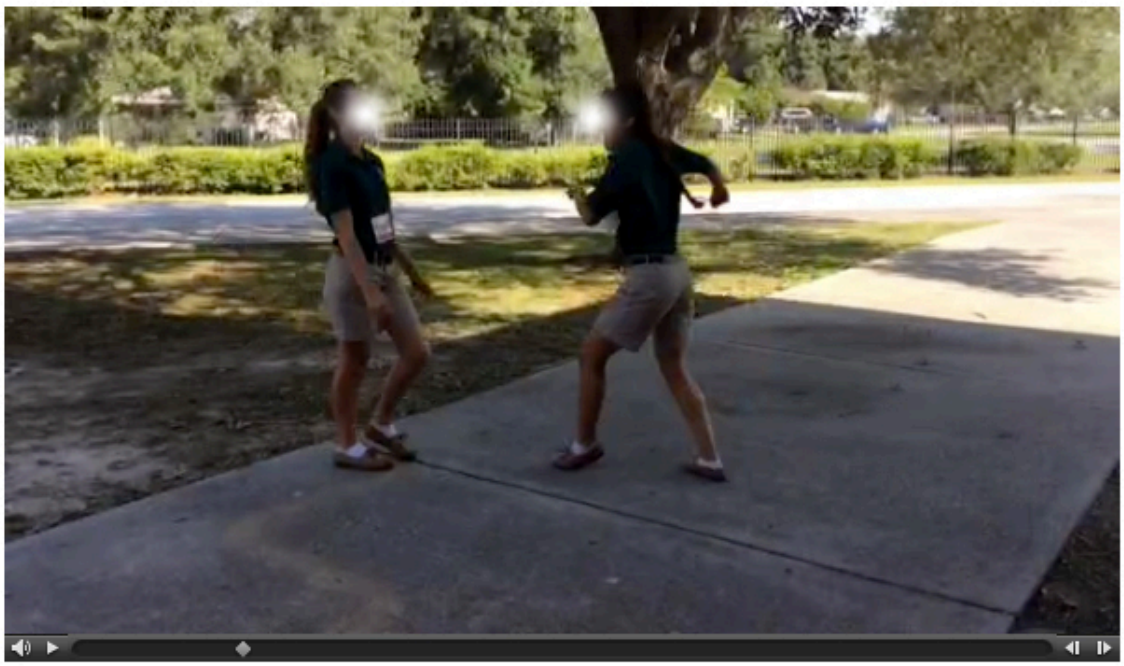


Figure 4.5. iMovie Sample Submission.

Rationale for implementation. When questioned regarding an understanding for why the technology was being implemented, Aura had no idea. All she knew was that, as per her teaching expectations from the school-based leadership, she was required to utilize them. She elaborated stating, "Currently in the classroom we are required to, well all of our students are given iPads and we are required to integrate into them into our curriculum." If the device being utilized were selected by Aura, she believed a laptop computer would better support her students because they spend so much time focusing on compositions skills. While keyboards are available as an iPad accessory, none of her students had one, as the school did not provide them.

Unexpected outcomes. The main difficulty noted in Aura's classroom that was described and observed was distractions from the device. She elaborated on this stating, "when they go onto a website, there may be 1000 other things on there in terms of ads and that kind of thing, so

that might make you more of a distraction." Furthermore, she highlighted concerns regarding students not being able to physically interact with a given text:

> I think there has been research on what it means to hold a book. We realize that a book is a whole, like thing. It is a complete object and has this many pages there is something about understanding where you are in a book that helps you understand, like, reading comprehension-wise. I'm not sure about that [laughs]. I haven't done any research on it. I think [the iPad] offers a lot of exciting tools, but there are distractions that have to be handled by the student, so in a sense it just depends on the student, how it affects their literacy.

Students were often observed visiting websites and playing games during class time. Due to the arrangement of Aura's classroom (see Figure 4.6), it was often difficult for her to assess who was on task and who was not. The class was split into two sides, but each student's desk faced where she stood in the center of the classroom. The screens of each student were not frequently visible to her, making monitoring the digital activity of each student difficult for her. When she became aware that students were off-task, her response was to ask them to put their iPad away for the remainder of class.

Figure 4.6. Aura's Classroom.

To cope with these distractions, Aura made a conscious effort to reduce the time spent on the iPads from her lower level classes. Advanced and Honors students were given more opportunities to interact with the technology while her remedial classes were significantly limited in what she asked them to do with the device:

> My lowest class we do a lot not on the iPad because when the iPad is in the equation we are playing games and we don't seem to be able to control our impulses like the other classes. I think it has a lot to do with maturity. In many cases there are medical reasons of some sort, like attention disorders. Umm, But I think it has mostly to do with maturity and ownership of your learning.

Theme Two: Evaluation

In the next section, I highlight descriptive findings associated with the ways in which multimodal tablet use was evaluated by school-based leadership as part of the formal observation process as well as the ways in which all three teachers self-assessed their technology integration. Additionally, I discuss each participant's understanding of the evaluation tool utilized and standards for technology promoted by the school, how often (if at all) evaluations occurred, and what each participant felt the administrative expectations were for the technological integration in the classroom setting.

Isabelle.

In the next section I discuss Isabelle's self-perception of multimodal tablet integration in her classroom as well as her understanding for technology evaluation at her school. Next, I discuss her interpretation of the administrative expectations for how the device should be implemented in her classroom in addition to her understanding of standards and policy that relate to it.

Self-evaluation. Isabelle made it known from the beginning that she was not an advanced technology user. In addition to a lack of knowledge and experience, she was often intimidated by the prospect of fully immersing herself and her classroom into the digital arena. She stated:

> I'm a little above a beginner, but I still have a long way to go. I'm trying to integrate technology more and more in my classroom. It was kind of tough this year for me because I'm not really, umm, I don't really understand some of the programs that they have offered to the kids and that so I was learning as the kids were learning. So it seems like they picked it up a lot faster than I did. But then there were some things that I was able to show them, but sometimes I'm a little fearful of technology.

This fear, and lack of experience, led to her creating focused attention on a small number of programs on the iPad and not deviating beyond that. Experimenting with new Apps was something she planned to do during the summer break when she had enrolled in an online technology college course to better her skills. For now, she felt that her classroom was a place where remedial learners could receive instruction on foundational skills and that the frills of multiple apps or other programs were not something she could add to her curriculum this year. She told me she focuses on:

> reading skills, research skills, you know, instead of, let's make an iMovie trailer, let's make a, uhhh, I don't want to call it a PowerPoint, but they call it KeyNote, uhhh, if they're getting it in other classes maybe they should have gotten it in my mine, but I just feel like I had to pick and choose.

Independently registering for (and paying for) online college courses, she aimed to learn these skills during the upcoming summer.

Determining whether the iPad technology was facilitating her instruction in an effective way was not something Isabelle had thought extensively about. She determined effectiveness could be assessed by examining, "if they're understanding what's going on and when we have class discussions, they can participate, and umm, like what I've been doing with Romeo and Juliet is their tests are open book because it makes them go back and look at specific passages and then it asks them to apply or synthesize information. It's not just "Oh. There's the answer right there." Her focus was overwhelmingly placed on content understanding and there was no clear connection between her assessment of activities that did and did not utilize the iPad technology.

Evaluation frequency. Even though all teachers were supposed to receive an annual technology evaluation (conducted by the Technology Integration Specialist and separate from the administrative evaluation), Isabelle did not receive one. When questioned regarding her response to this, she told me, "Ya, but I have a feeling because I only teach two periods a day and the rest of the time I'm doing the exceptional student education."

Twice during the year she had, however, received an administrative evaluation in which technology was a "small" component in which she received feedback. The feedback provided indicated that Isabelle "needed to have the students reading the information instead of just letting them listen [to the books on the iPad]." She elaborated that the administrative team felt that students should be responsible for independently reading their texts and not relying on the teacher to provide a reading to them. This way, they will be "ready for when they are on the upper levels and they will have to read novels and the teacher isn't going to be making sure they have read it because they have listened to it." She was conflicted, however, based on what she believed other teachers were doing to support their students through the use of audio books:

> But I have also heard that some of my colleagues are using the, ummm, CDs that have portions of the, if they want a particular section of a book read so that they can discuss it, so that those students who do have the reading disabilities don't have to be fighting to figure out what the words are. Because some of these kids, I've said, if they can hear it, they know what is going on. They spend so much time when they have to read it themselves, just trying to figure out what is going on. But if they are hearing it, you know. We do need to have some program to help them see, but is there going to be time when they are going to have to figure out what it says, and show them different programs that they can use.

This ambiguity was not clarified by administration and Isabelle continued to utilize the audio books in her classroom during my observations.

Evaluation tool. Isabelle was not provided with a technology evaluation during the academic year in which data were collected. She did, however, respond that technology integration was part of her annual evaluation. She described administrative observations that also review how the iPad technology is being utilized. If a teacher is not utilizing the iPad technology or is not deemed to be utilizing it effectively, Isabelle believed the administrator would contact the Technology Integration Specialist and request that that teacher be provided with additional support. Isabelle elaborated, **"**sometimes if a teacher is struggling or is not using it, then I guess [the administrator] will contact [the technology integration specialist] and say 'You need to go in and talk to this person and I didn't see anything the whole period and they're supposed to be using it.'"

Administrative expectations. The expectations from the administration for how Isabelle should be interacting with the iPads were to use, "Pages, Notability, and Edmodo." Additionally, due to comments from Tracy on her administrative evaluations, she believed another expectation was to "read aloud to [her] students more often, and not rely on the [digital reading] all the time".

Standards. When questioned about standards utilized for technology integration at Isabelle's school as part of the technology initiative, she was unaware of whether any were being utilized. No technology standards were utilized within her lesson planning. She referenced the CPALMs as the set of standards for "technology within [her] content area" that guided her lesson planning, but was overall was unsure about which standards she should be utilizing and how they might influence her teaching practice:

> they're online and basically it's part of the, ummm, not the Common Core, we don't use the Common Core, it's umm the diocese, it's from the state and it lists, ok these are the things by the end of freshman year they should be able to do. By the end of sophomore year… CPALMS.

When asked about whether she was aware of any other standards that are promoted by the school for technology integration, she stated that she had no knowledge of any other standards.

Lola. In the next section I discuss Lola's self-perception of multimodal tablet integration in her classroom as well as her understanding for technology evaluation at her school. Next, I discuss her interpretation of the administrative expectations for how the device should be implemented in her classroom in addition to her understanding of standards and policy that relate to it.

Self-evaluation. Lola, assessed her technology abilities in the classroom stating, "I think that I'm doing pretty well, umm. There's always things I would like to do better, but I think that most of the problems that the students have we seem to be able to figure out or how to work around it, or solve the problem, or umm, I think just with more time I'll get better, of course and find better ways to incorporate technology into what I'm doing and make the technology kind of, I guess more of a natural part of the class. So, I think that I'm doing, I would say good. I would say 7/10."

Evaluation frequency. Lola did not receive a technology evaluation during this academic year even though she had been provided a one-week window in which the technology integration specialist stated she would be stopping by to conduct one. Lola stated, "I got an email last week that said I would have a technology observation at some point during the week and it never happened." When I asked her about what the reason may have been, she responded by telling me,

"well, it's always tricky to know why. My last name is [states last name], was I at the end of the list and she just didn't get to me? Did she look at the list and she thought I probably was doing ok, so she didn't need to do a formal observation necessarily, uhh, I don't know the why, but it is frustrating when you want feedback and you want to do better, and no one gives it to you." Lola never received any additional communication to clarify why her evaluation did not occur. When questioned about whether she had received technology feedback as part of any other observation (scheduled or otherwise), she told me, "no, formally, no." She elaborated, telling me, "Informally, just the typical pat on the back. Good job. Just keep doing what you're doing," but nothing substantive was ever provided.

Beyond the lack of a technology observation, Lola did receive informal observations during the academic year studied as part of this dissertation. She clarified:

> I've had one informal observation, well technically two. [My administrator] did an informal observation in February. She came in, she was here for 15 -20 minutes, but as far as I know that is not tied in any way my job performance or anything like that. And then [the principal came in] and observed me a few weeks ago, but that observation was more for him to evaluate the other administrators. The way he put it to me, was he was checking to see if they're evaluations of some specific teachers were accurate.

While these administrative evaluations had occurred, technology integration was not a component included in any feedback or discussion. Additional observations were completed by Lola's English department chair:

> My department chair did a few. The first was informal, but I invited her to come in. I said 'Something really cool is going on today if you want to come see.' So, she came and she wrote up an observation since she had been there. I suppose this was supposed to be a

formal observation at the end of the year. There was no pre-conference or post-conference, but she told me she would come in at some point, but not a particular period or day.

Whether technology integration was assessed as part of her departmental evaluation, Lola again responded that it was not stating, “I don’t think any of those observations had any feedback for technology specifically. I mean it was used in lessons, but I don’t think that the form actually states anywhere, there’s no, as far as I can recall, there’s nothing about technology in there.”

Evaluation tool. While discussing evaluations with Lola, I questioned her about whether a teacher could still receive an exemplary evaluation even without integrating iPad technology into the lesson. She responded, “Yes, because it’s not on [the evaluation tool].” Because the evaluation tool lacked a clear connection to technology, Lola believed teachers would be able to, at least in her department, not utilize the device without consequence. Lola described the lack of buy-in in her department telling me, “[The English department chair] wouldn’t care because I don’t think she wants to use them anyway. Umm, I don’t know how anyone would even know because if I said ‘Oh ya let’s get our your iPads when somebody showed up for an observation’ how would they know?” Figure 4.7 illustrates a departmental evaluation that does not include any feedback related to integration of the iPad.

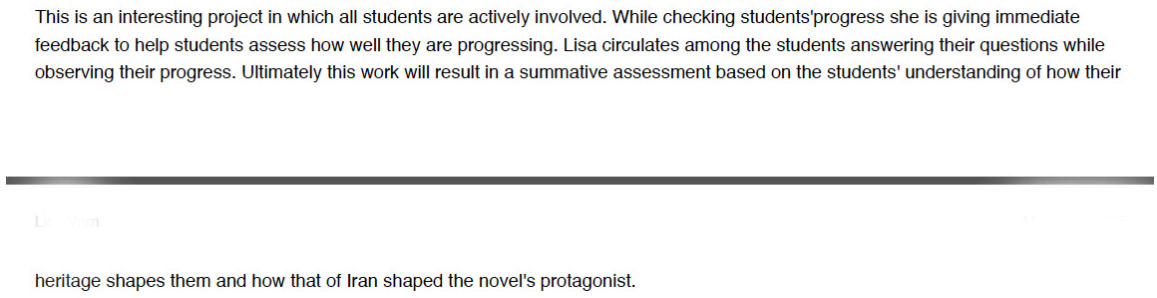


Figure 4.7. Departmental Evaluation.

Administrative expectations. The administrative expectations for how the iPads should be utilized in the English classrooms were not abundantly clear to Lola (see Figure 4.8 for the expectations provided to teachers). She often described how her teaching was impacted by the devices, because she felt it what was best for her students and not because she felt pressure from the administration to integrate them in any particular way. She noted:

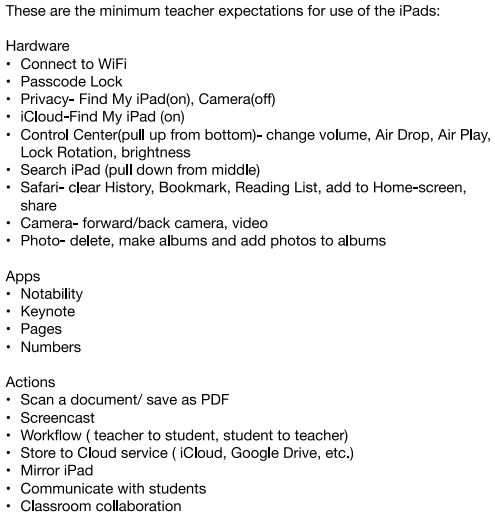
> I think [the technology integration specialist] was supposed to be handling [the dissemination of expectations], but she has not been really forthcoming with what the expectation is. And I don't know if that's because she's been overwhelmed with other things. I don't know what the reasons are. It's not been clear what, and I'm not even sure if they had expectations for this year. It might have been the sort of thing where they just wanted to see what happens. Just throw them in there. If we get positive results, then we do, and if we don't then we have a baseline of where we are. But I don't know if that's the best way to do it.

Lola further noted the difficulties associated with a lack of clear guidelines and expectations for how the devices should be utilized in every classroom:

> Well if we have expectations for iPads should be used, they need to be written down, not just verbally communicated at a meeting. Because if they are just verbally communicated at a meeting they can be misconstrued, they can be changed basically. It needs to be written in a place where everyone can access it easily. Because to say I'll just put it up on our shared space in Google Drive- that thing is a mess. I can't find anything in there. Sometimes it takes hours just to figure out where someone put something. So to just say that it's in Google Drive is not acceptable. It needs to be in a very specific place so we can take a look at these resources and that doesn't exist as far as I know. So there is probably a lot of reorganization and restructuring and this isn't a problem that is specific to technology. It's a problem for everything around here. Things aren't written down and they're not published. So how do people know what they are expected to do?

Enumerating further on this, Lola stated, Evaluations around here aren't very clear, what counts for what, what is informal and what is formal, are they all informal and that's what you're going for? Are some of these formal? It's all very unclear."

With such a lack of clarity regarding how Lola should integrate the iPads into her classroom, she also pondered what that meant for students and the school as a whole. She articulated, " I don't know that, umm, the school has even thought about the connection between this use of technology and student achievement. I think this mostly about appearances and keeping up with the other schools in the area and making ourselves competitive with them." She believed the school was satisfied so long as the iPad devices were in the hands of each student and administrators could, therefore, promote the technology initiative to prospective and current parents. Anything beyond having the iPads physically in the hands of every student was, as Lola described, "a bonus."



These are the minimum teacher expectations for use of the iPads:

Hardware
- Connect to WiFi
- Passcode Lock
- Privacy- Find My iPad(on), Camera(off)
- iCloud-Find My iPad (on)
- Control Center(pull up from bottom)- change volume, Air Drop, Air Play, Lock Rotation, brightness
- Search iPad (pull down from middle)
- Safari- clear History, Bookmark, Reading List, add to Home-screen, share
- Camera- forward/back camera, video
- Photo- delete, make albums and add photos to albums

Apps
- Notability
- Keynote
- Pages
- Numbers

Actions
- Scan a document/ save as PDF
- Screencast
- Workflow (teacher to student, student to teacher)
- Store to Cloud service (iCloud, Google Drive, etc.)
- Mirror iPad
- Communicate with students
- Classroom collaboration

Figure 4.8. Administrative Expectations.

Standards. Lola was not only aware of the standards for technology use in her school, but she was part of the group that selected them:

> Yes, and last year what we did, this was part of what [Deborah] did with us, she had us in groups, and each group was responsible for one aspect of this technology integration. So, I was in the group that chose the standards. So we had to look at, here are some ideas of where to start so take a look and decide which standards are best for you to use? You can alter them if you want, so we looked at the ISTE standards and decided- oh yes, these are the ones. This is, this is good stuff. We should just stick with this.

While important as the standards would supposedly help guide the technology reform, very little thought or time, (only "30 minutes") was put into their selection:

> We just Googled and found these and said they were good. Another good was writing a student handbook about technology so someone Googled procedures and just getting ideas together essentially. And another group was working on a faculty handbook about basic skills that faculty members should have when using technology.

Beyond their selection, Lola did not believe much was being done with the ISTE standards on campus—I'm not sure we're doing much with those ISTE standards to be quite honest. I know they were selected, but I'm not sure what else.

Aura. In the next section I discuss Aura's self-perception of multimodal tablet integration in her classroom as well as her understanding for technology evaluation at her school. Next, I discuss her interpretation of the administrative expectations for how the device should be implemented in her classroom in addition to her understanding of standards and policy that relate to it.

Self-evaluation. Aura was "fairly comfortable" with the iPad technology and felt she could interact with it appropriately in her classroom. Additionally, she felt she knew "what else is out there" and was open to "try[ing] new things all the time."

Evaluation frequency. Aura had been evaluated once during the academic year for technology, but had not received any feedback. There was no pre-conference or post-conference and she was unsure if there would be any follow-up. She had, however, received an administrative evaluation and departmental evaluation, but neither included any feedback for technology integration.

Evaluation tool. The tool Aura was aware of were the ISTE standards. She believed she would be evaluated "based on how well [she] integrated them." Since, she had not received any feedback, however, Aura was "unsure." Aura had received an administrative evaluation,

however, but it did not include any feedback related to her technology integration (See Figure 4.9).

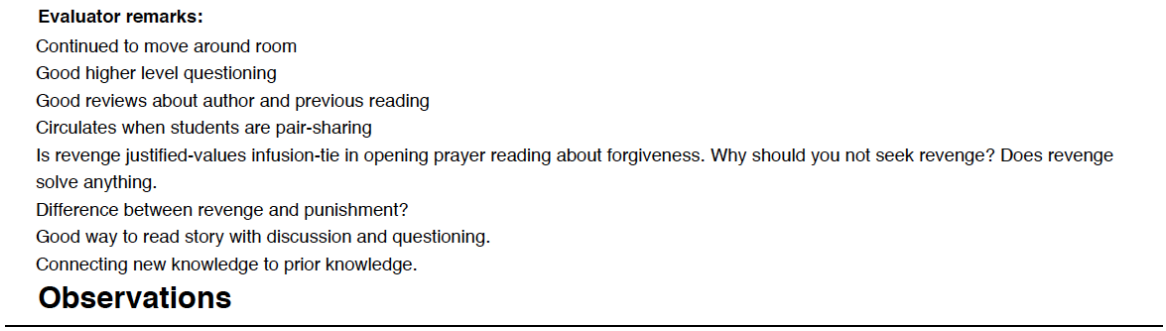


Figure 4.9. Aura's Evaluative Feedback.

Administrative expectations. Aura believed the administration expected her to use the "iPad every day" but that that was it. "There aren't any requirements for making a certain number of posts or anything specific like that. We are just supposed to use them." She believed as long as the administration would see students utilizing the iPads in "some way," they "[the administration] would be happy."

Standards. Aura was aware of the "ISTE Standards," being chosen for the school, but did not know anything about them specifically. She "did not use them for planning" and did not believe she was required to do so.

Theme Three: Improving Current Practice and Moving Forward

In the next section, I highlight the descriptive findings associated with each of three classroom teachers examined as part of this dissertation. This section begins with a report of each participant's thoughts regarding the formal professional development sessions offered to them, resources provided to each teacher for overcoming difficulties associated with technology, and goals for the future of the technology initiative.

Isabelle. In the next section I discuss Isabelle's perception of professional development offered to her in addition to her goals for the future as they relate to multimodal tablet integration. Finally, I highlight the avenues she describes as being available to her when difficulties with technology integration occur.

Formal professional development sessions. Isabelle stated that formal Professional Development sessions were offered on-campus, "At least once or twice or month" and were typically hosted by the technology integration specialist. During these scheduled professional development sessions, the structure would vary. It may be a presentation about:

> New Apps that are out there or [the technology integration specialist will] have us all get together as a faculty and have people talk about what they're doing and how they're using them and so that people are sharing the different stuff. That's how I learned how to use KeyNote. That's how I learned how to use [a program that creates] comic strip where the kids can create a poster or something, iMovie, iTrailers, you know some of the ones they teach us. In fact, the last professional development through her was the teachers showing what they've been doing, what they have found.

Isabelle believed that the professional development sessions were both helping and beneficial. Typically, they were scheduled on Wednesdays because those days were half days for students. Since the students were released from school early, the teachers were granted additional time for professional development, meetings, and/or planning. Often, however, the professional development was not mandatory for all teachers. Isabelle highlighted that the technology integration specialist, after receiving approval from the school's administration team, would notify the staff that she would be offering a PD session for anyone interested in attending. Teachers who did attend would receive in-service points if they filled out the appropriate

paperwork. For those teachers in need of in-service points toward recertification, this proved to be a helpful opportunity to learn something new about technology integration and work toward maintaining their teaching certification.

Trouble-shooting resources. Isabelle articulated that the technology integration specialist frequently sent out emails with updates and tips associated with the iPads. These updates, however, were not enough for Isabelle, who still required substantial time outside of her classroom to locate new and helpful information. She stated, "I spend a lot of time outside of school surfing the web and actually looking for stuff. Like, right now I'm in the process of looking for- what am I going to use this year to teach the reading portion of the summer school? I try to do constantly, you know, searching for stuff." When I probed her about what she was specifically looking for, she stated her searches were more content-specific than Apps or tools for the iPad and that she was still building the foundation something different every year. The skills for effectively utilizing the iPad, she believed, would come later when she had additional experience utilizing the device.

Support for Isabelle did not extend beyond the boundaries of the school. She did not know of anyone at the diocesan level available for technology support. Administrative support, in Isabelle's opinion was most apparent in the form of emails. She elaborated that, "Our Vice Principal is always surfing the web and when she comes across things that she thinks will help us in certain subject areas she will send them out to us. So…she'll send out emails, you know. We get a lot of information from the administration via email."

If there are networking problems or if a device breaks, there is on-campus support available for students and teachers. She shared that there is "IT support. We type up a report. It's

done through our email and it's sent to the IT Specialist and then they'll come and they try and get to you when you have an off-period or before school or after school and take care of it."

Goals for the future. When questioned about goals for the school with respect to iPad integration, Isabelle was not certain. She believed the technology integration specialist would know best, because she was quite unsure. The goals she was aware of related more toward school-wide collaboration and communication- "Ya, we're getting further and further, getting more and more and some of [the goals] I think are coming from the diocese because I think the diocese sees that, you know, the digital is the way of the future and so they're also trying to get everybody on the same page and that." Isabelle believed that the technology initiative was a result of a larger plan from the diocese, rather than something developed organically from the school.

School-based goals, she felt, related more toward the integration of specific Apps and programs. She elaborated that, "each of the departments had to take one of the Apps and teach it to freshman and teach it to the sophomores and then the teachers are supposed to be using that App. So in my class, the students can be using Pages or they can be using Notability and try to turn things in." Even this concerted effort to develop an in-depth understanding of a small number of programs has not been without difficulty, however, as she explained, "we are trying to go as paperless as we can, but we have, you know found that, you know, that even with Edmodo and turning in assignments, sometimes depending on where the child does the assignment, sometimes we get them and sometimes we don't. Sometimes you have to sort of 'Ok. Show me your iPad' and the kid can say 'Look here, I did it.'"

When referencing school policies related to technology, Isabelle could only recall brief mentions from the administration during faculty meetings, but nothing specific came to mind.

There is also an online handbook she believed, but was not sure, that contained policies for technology. This handbook was developed for the needs of teachers, students, parents, and any other appropriate stakeholders.

Lola. In the next section I discuss Lola's perception of professional development offered to her in addition to her goals for the future as they relate to multimodal tablet integration. Finally, I highlight the avenues she describes as being available to her when difficulties with technology integration occur.

Formal professional development sessions. Lola believed professional development was lacking the depth and comprehensiveness needed for such a large endeavor in addition to any support related to the changing dynamics of a technologically-rich classroom. She described the scenario when the iPads were first distributed:

> The [administration] said 'Here is your iPad, we want you to start using them, and they should be used every day.' I mean this is all verbal expectation, of course. Nothing is written down, ummm, so then once we are in there and we are doing stuff it became abundantly clear that you can't run a classroom with these iPads in the same way that you would without them. So then it became 'Students are doing X, Y, and Z, and it's preventing them from learning' and the only response we would get would be "that's a classroom management problem."

Lola shared that the administration felt strongly that classroom management and technology integration were not the same issue and, thus, no further support was needed. Lola shared her frustration stating:

> So my argument became, "no it's not really my problem, because you have changed everything about how I need to do my job. You need to provide some training so I can

> still do my job." I forget what it was, but there was some kind of survey where we filled in what we need for technology and I made sure that classroom management with technology. We need training in this. It's nice that you show me how to use a bunch of Apps, but you've shown me nothing about how to manage my class with all of this.

Lola was left to modify her classroom management plan independently and learn through trail and error. No professional development related to classroom management was offered during the academic year studied as part of this dissertation.

Beyond the lack of support for the changing dynamics of her classroom, Lola was also frustrated by the one-size-fits-all approach to learning. She elaborated

> [There has been] some [Professional Development], but quite honestly it's been well below my skill level. It's been introducing specific Apps to us, where I know that if I download the App and looked at it for 5-10 minutes, I could figure it out. I don't need to sit there for 30 minutes learning how to figure it out. But it's valuable for some on our faculty, just not for all.

At the onset of the academic year, professional development sessions were structured so that faculty members were organized based on their technological proficiency (as assessed by each individual teacher). These meetings provided instruction that was appropriate to the skill level of the individual teacher. Lola felt this structure was very effective and helped to maximize the time spent during such meetings. This methodology for professional development, however, fell by the wayside early in the academic year and, thus, was followed with a one-size-fits-all approach aiming to support the teaching faculty as a whole.

Trouble-shooting resources. For Lola, trouble-shooting and working through difficulties was a developing process. As her utilization of the iPad devices became more comprehensive, so

too did the challenges associated with it. For her, this meant additional time researching ideas and strategies to support her teaching. Lola shared:

> When we first got these iPads, I wasn't sure exactly how things were going to go, so I sort of just played it by ear for the first few weeks just to see what would happen. And as I started to discover what the difficulties were, I would sit down and research, 'ok if I have this technology in my classroom, what are the recommendations? How can I solve this problem?' Every time I encountered a problem, I would kind of take a step back and reflect on it and do some research and figure out a solution to the problem, so by the end of the school year, I feel like the iPads were a much more natural part of what we were doing. Whereas at the beginning of the school year, the iPad just replaced your book and notebook and that's really all we did, but now it's becoming much more integrated.

Beyond her own research, Lola also relied on the technology integration specialist for support. Their strategy was to work together to develop a plan and not rely on a quick fix. She shared, "I've been to see [the technology integration specialist] a few times if I wanted to use specific Apps or to ask her what would be the best way to do something and she's been helpful. A lot of times we just sat and sort of figured it out together. Just talking it out helped us to figure it out."

Goals for the future. When questioned about school-wide goals for the future with respect to iPad integration, Lola was unsure. She articulated personal goals that included moving toward a more authentic integration of technology in which her instruction would be enhanced by the devices. She aimed to reduce her use of the device as a mere replacement for paper, and enrich the experiences of her students. She was, however, unsure whether she or any other faculty members were clear on what a technology-rich classroom should look like. She stated

that the school had never provided (as far as she knew) any examples or what best practice for English instruction in a technology-rich environment looked like.

Aura. In the next section I discuss Aura's perception of professional development offered to her in addition to her goals for the future as they relate to multimodal tablet integration. Finally, I highlight the avenues she describes as being available to her when difficulties with technology integration occur.

Formal professional development sessions. Aura described professional development as often being below her ability level and frequently a "waste of time." She described one session in which they spent "the whole time showing us how to turn [the iPad on] and use the camera" which was a skill she already possessed with proficiency. "Apps" were frequently sent her "via email by Deborah" and Aura would "always" look at the email and see if it could be useful to her. She was open to trying new technologies and experimenting in her classroom. She did feel, however, that many of the professional development sessions should be covered via email instead of in person. "Most of the time, it's just learning about an App. They could just send me the information in an email and I would try it out. We don't need to sit there after school."

Trouble-shooting resources. Aura did not feel confident in the abilities of the resources around her. Her primary source of support were the fellow teachers in her graduate program. Her bigger questions would be reserved for their summer institute meeting as a cohort, but smaller day-to-day problems would be posed to the group of students via their private Facebook group. She shared, "If I have a question, I'll just post in the group and see what they say." When I asked her if she would seek support from anyone on campus, she said, "maybe Lola, but that's about it." She viewed her colleague, Lola, as someone who integrated technology effectively and served as

a meaningful piece of support. Beyond that, she would "just look online and see what [she could] find."

Goals for the future. Aura's goals for next year revolved around moving more of her curriculum into the online arena and going completely paperless. She wanted to "get everything on Edmodo" and "post something every day." She also aimed to continue to "try new Apps all the time." She would be "taking online classes this summer" to help improve her skills and hoped that this would facilities a better acquisition of the device in her classroom.

Leadership

Following the exploratory nature of this study, five participants, in addition to the three classroom English teachers described in the previous sections, were interviewed and each subsequent response was analyzed. The additional participants (all serving in school-based leadership roles) were selected because they were referenced by as least one of the teacher participants as being influential in some capacity related to technology. Each leadership participant was interviewed once for one hour (see Appendix C for protocol) and, when appropriate, artifact documents in the form of emails, published policies and documents were collected and examined. The leadership members who participated include:

a. Principal
b. Vice Principal
c. Technology Integration Specialist
d. Information Technology Director
e. Department Chair of Reading

Secondary Participants. Each leadership participant has been organized within the hierarchical structure adopted by the school. This includes: school-based leadership, technology leadership, and departmental leadership.

Tim. Tim has been the principal of the school studied for five years. He considers himself to be the manager of school and works diligently to manage the business and financial end. He relies heavily on his Assistant Principal, Tracy to manage the curricular aspects related to the high school.

Tracy. Tracy is the current Assistant Principal of Curriculum and has served in this role for three years. She is responsible for completing the administrative evaluations of all members of the teaching faculty and considers this to be her "dream job." She works diligently to remain visible to the teachers and instituted a policy where all classrooms must have an empty chair in the back in case she pops in to observe.

Technology Leadership.

Steve. Steve's current role is as the Director of Information Technology. Prior to taking on this duty and completing his PhD in Educational Technology, he worked as a Principal for 10 years at another diocesan school.

Deborah. Deborah served as the school's Technology Integration Specialist. Prior to taking on this role, she was a high school Math teacher. Her current duties include planning professional development sessions for the entire teaching faculty, serving as a resource to individual teachers and departments, evaluating the technology integration of all teachers on campus, and serving as the chair for the Learning Lab.

Departmental Leadership.

Roberta. Roberta has been an English teacher for 37 years. Prior to moving to Florida, she taught in Boston and served as Department Head for 12 years. During this time, she earned her PhD in English. She has been the current department head for 3 years and retired at the end of the academic year studied. She appointed Lola as her successor as department head of English.

Theme One: Implementation of the Device. In the next section, I highlight my descriptive findings associated with the ways in which the iPad is utilized by the leadership members. Below I describe each participant's personal definition and understanding of educational technology. Furthermore, I discuss each participant's understanding of the rationale for utilizing the technology as part of a school-wide initiative as well as the unexpected outcomes they are aware of with respect to the implementation of multimodal tablets into the English classrooms.

School-Based Leadership.

Tim.

Personal understanding of educational technology. Tim described technology in education as "innovation. Innovation that improves or enhances learning." He continued, "Technology 100 years ago could have been a paper and pencil." He believed strongly in the innovation associated with the iPad initiative he helped to spearhead at the high school he served as principal of.

Daily uses and application. While utilizing technology, and specifically the iPad, Tim articulated that he tries to model as often as possible for his faculty. Specifically, he referenced a presentation known as the "State of the School" that occurs twice each year. He stated:

> I don't just stand up there with a piece of paper and give a speech. I don't just stand up there with a piece of paper. I try to use technology as much as I can to make my job easier and a lot more efficient, like anyone else. I think the biggest thing is to model and, it's more difficult for me, but to be that lifelong learner of technology.

While he articulated that he likes to model technology integration for his staff, he also learns from the teachers. "It's fun, but I find a lot of the time, as a leader, I'm behind the eight ball. So I actually learn a lot by going into the classrooms and watching." Technology, he believed, "can help the teacher keep students engaged, can better communicate standards and lessons and feedback in a more timely fashion."

Rationale for implementation. The rationale for why this initiative was implemented was related to decisions made at the school level because, as Tim asserted, "initiatives that have come down from the diocese have not included technology. . . We, as schools, have the autonomy to decide if we are going to do something like that." He felt strongly that, as a school, "we couldn't afford not to move forward with this. And I think because we moved forward some of our competitors moved forward maybe quicker than they wanted to because word got out that [our school] was moving forward." He further articulated the "strategic plan" that resulted in iPads being utilized as part of the technology initiative.

> We put a strategic plan in place. It's probably been, well, now 4 years. The strategic plan for us was a 3-5 year plan and one of the buckets we had was, one of the large initiatives technology. So I'm trying to think of the way we did it, because we didn't know it was going to be iPads 4 years ago. It was we are going to create an infrastructure at [our school] that supports technology innovation or something to that effect. So it was vague enough that we knew back then that it might, we don't know if it's laptops or if it's

> Kindles, but we knew that we needed something and we knew that we needed to move toward electronic books. We knew that something was going to happen where it was going to go that way. The work that we did early on was the infrastructure, the wireless, the … all that jazz.

Initially, the plan was to support a "bring-your-own-device" initiative, but the administrative team, after visiting another school with a similar initiative proved to be a poor fit for the school. Tim felt that students would be bringing too many different devices on campus and it would be difficult to get them to communicate with whatever device the teacher was utilizing. The result of this was a decision to scrap the bring-your-own-device plan and, instead focus on a new initiative that would provide iPads to all teachers and students.

Unexpected outcomes. Tim felt strongly that without adapting to include new technologies, "we might as well cease as a school." The result was a technology iniative that embraced iPad technology for students and teachers. The initiative, however, was not without resulting difficulties. "Distractions," he felt, were a significant difficult students and teachers needed to learn to overcome. He also felt that teachers had a strong desire to authentically utilize the devices as part of their instruction, but sometimes felt overwhelmed by the innumerable possibilities one could take away from it. He shared:

> I think the teachers want the iPads to be more than just a gadget or a toy. They don't just want to know about the latest cool app they can have fun with, um, They truly want it to be a learning tool and I think some learning and maybe some subjects promote that more than others. The biggest feedback as I've talked to some teachers, has been ' we want… less is more' Go in depth with less uses of the iPad than kind of sprinkling all the things that an iPad can do. So, show me how teacher 'A' in English is able to effectively utilize

> the iPad and how I can make that relevant in Social Studies. That's what they want and I think that's what we have to take and listen and learn from this first initial year and say, Ok. You kind of have to drill down and as an iPad committee, we talked about that. We were going to just do Pages, Numbers, Notability, whatever. You know those were going to be the only things we concentrated on, and I think we had good intentions, but you know we might need to harness it a little and go back as a school.

He further shared that having teachers who felt overwhelmed may be the result of incomplete communication from the administrative team and a lack of understanding with respect to *how* teachers should be integrating the technology into their classrooms.

> I think that's been it. They've almost been overwhelmed with the unlimited possibilities of the iPad and they would like a little bit more of a clear direction as to what is it the expectation that an administrator would have of me for use of the iPad. Some are going to meet that minimum expectation and just go, but others want to know 'What is it that you want to see when you walk in?'

Tracy.

Personal understanding of educational technology Tracy believed that "technology is a resource" for students and teachers. She elaborated that, "technology is a really exciting tool for now, for the future, but again technology is not going to make great teachers. It will enhance what great teachers can do, but it's only as good as the great teacher. That's it." iPads, she connected:

> are one of those tools, but it's not the end all, be all. I've always told my teachers I will do everything in my power to get my teachers everything they need. Sometimes we think we need the newest and the best gadget and no we don't. Look at our phones. I still truly

believe I can go in and be the most phenomenal teacher without any technology. Does technology enhance learning? Absolutely.. But it's not going to make a poor teacher, great. And if you're not a great teacher, I want to help you find the place that's right for you, but it won't be where I work.

Daily uses and application. Within education, Tracy felt that there were many ways in which technology could be useful. For teachers, she felt, "Technology should be a resource to help them in the classroom and help students to learn." She believed it was there to support instruction, but never to guide it. As an administrator, Tracy would utilize the iPad for, "teacher observations and walkthroughs. For research for myself—creating presentations that I do on committees that I'm on. For presentations for the teachers for social media, for personal use, for communications related to work, communications related to personal life, for streaming videos, I use it for a lot."

Rationale for implementation. Tracy stated the technology initiative was the result of discussions from within the Technology Integration Committee, a committee in which she served on alongside the principal, director of technology, the technology integration specialist, alongside several teachers, and students. She believed the decision to move forward with iPads was a result of additional discussions from the committee (as opposed to utilizing a different device). The rationale for utilizing iPads was due to their "portability, their assessability, what we thought the Apps would be able to do for us." Based on the decisions and conversations of the Technology Integration Committee, she believed, the initiative and selection of the iPads were made.

Unexpected Outcomes. Tracy highlighted multiple difficulties associated with the technology initiative and implementation of the iPad devices. Initially, she described the

distractions the students experience due to the availability of games and Apps in which they could play with. She posited, however, that those classrooms in which the students were more engaged with playing games on their iPads were likely lacking in dynamic instruction. She elaborated about her beliefs and experiences sharing, "I see the worry about whether the kids go to this App or that App and I kinda feel like, you know what, when I was student, if a teacher was boring [I would be less likely to pay attention]." She continued, highlighting the need to modify the classroom dynamics to effectively utilize the device, "so, why not let it be a challenge as a teacher to engage your students and if your students are using it for other purposes, don't see [the iPad] as a bad guy, see what we you can do to help the students learn a better way."

Continuing her thoughts, Tracy described her beliefs that the iPad itself is not the problem and that teachers had a duty to modify their classroom management plans to accommodate its place in each classroom. She posited:

> What we try to show them is that it's not an iPad problem, but instead it's a classroom management plan. It's not a technology problem. You were having that same problem before the iPad was there. It might have looked a little different, but the problem was still there. So this issue is getting the teacher to see that. It would make things better or easier for you. It may make problems look a little different, but if you had a problem with something you're still going to have a problem with that. It's not necessarily going to add new problems, but it might add a new dimension.

Technology Leadership

Steve.

Personal understanding of educational technology. Steve believed that educational technology included "any type of device that would be used to enhance student learning."

Daily uses and application. Steve's utilization of technology included, "assess[ing] what we're trying to teach in terms of content and then whether or not there is any type of relevant applications or software that can be used to further than learning experience."

Rationale for implementation Steve, as the IT director, felt he had a clear understanding of the rationale behind moving toward a technologically immersed environment for all the students at his school. He listed the reasons as being: to remain competitive with the other schools in the area, marketing, and, finally, to promote academic excellence. He shared:

> I think the reason for going to the one-to-one, I don't care if it's a laptop or whatever. #1: competitiveness, you have to remain competitive with your competition. Whether it's a Catholic school or not, it could be [lists the name of neighboring schools], you have to remain competitive. They have a device, they have a one-to-one, we need to also. The second thing is marketing. Someone moves into the area and they do a Google search and they see we are an iPad school. The third thing would be preparing students to be good digital citizens. This is their future technology so being able to utilize this to drive performance and not the curriculum would be the third reason why we went in this direction. In that order. And you would think academic [would be the first reason]. Let's face it, let's be realistic. You go around and poll administrators that have been involved in initiatives it's the same thing: competitiveness, it's a marketing strategy, and then that third thing, which really should be first, is how are we going to impact learning. And I don't think that's something that was something that was always a priority. It's we need to become an iPad school because [other schools in the area are].

Initially, Steve had advocated for the school to utilize a plan that required each student to bring their own technology device to school each day. After researching this type of plan,

however, he discovered that this type of initiative had the potential to lead to difficulties associated with networking, communication of the devices, and digital safety. He highlights the transition from the "bring-your-own-device" initiative to the iPad initiative:

> Initially, the first year, when I got here four years ago, I installed the wireless network so we wanted students to bring in their own devices so we could test the parameters of the network. But then we realized quickly because we went to some other schools that had initiatives, equity is very important. You really need to have the same device, the same platform to have everything work together. If you have a laptop and you're running a Microsoft platform and I'm using my iPad and my lesson is built on notability, you're looking at Microsoft Word or Google Apps perhaps, it's not the same thing. It's not apples to apples. So I think equity was very important in terms of platform, in terms of type of device and in terms of everyone having the same device. Not just because I can afford it because we have kids here that do, kids on some type of scholarship funding or they don't pay at all because they can't, so I think that's really really important and we would not have been able to reach that goal with a bring your own device and the other factor on my side with technology is control. We can really control a lot that goes on with this device and legally we can grab the device. Anybody that's on our network that's using our wifi even if it's your phone, I can tell what you're doing through our firewall. You have an IP address. If you're using a data plan, then I can't tell, but if you're not then I can tell what you're doing based on your IP address. Everything that you've done or gone to while you've been on campus, so we have that control. I can also lock these iPads.

Unexpected outcomes. One outcome of the iPad initiative Steve described was he differences in ability for technology integration among teachers, He shared his opinions stating, "I would say 1/3 is in that upper echelon, I would say 1/3, 1/3, 1/3. 1/3 is still at that very basic level, that's what I would gather." He believed that teachers did want to learn more about how to effectively integrate the iPad technology into their classrooms, but were often burdened with so many other duties and tasks that they were simply too overwhelmed to put in the time needed to develop proficiency. The teachers:

> are inundated with the changes and the requirements in education, you know, like Common Core, and Understanding by Design, and now we have, we are looking at, the different Standards Based Grading. It's so much more than just all that. If it's writing your lesson plans or attending an optional development opportunity after school, most of our teachers would say no, I can work on my lesson plans, or I can work on grading, or I can go home because I'm exhausted. Instead of taking an opportunity to help them grow and using technology in the classroom.

Teachers being spread too thin has led to spread in ability described above in which 1/3 of teachers are only at a basic level of integration, 1/3 are moderately integrating the technology, and 1/3 are integrating it at an exceptional level.

Steve believed the technology team was doing their best to facilitate increased technology learning among the teaching faculty, but was often held back by the school's administration. In addition to already overwhelming workload experienced by many teachers, professional development seminars would often be cancelled at the last minute due to decisions made by administration that other details were more pertinent. He described what he believed the perspective of many teachers on campus to be:

> As a teacher, I was expecting to see this presentation on Notability as an example, and everything has changed. The agenda has changed. And now we are just focusing on whatever else the administration needs to cover, whatever they need. And then don't even mention, oh you know we're going to make this up after school or whatever. So that's frustrating. There's no consistency.

Essentially, teachers who were hoping to spend time learning new ways to integrate technology were left without the support they were told they would receive. He continued that the lack of consistency extended beyond cancelled professional developments to varying initiatives at the school and diocesan level. Because there was a revolving door of new ideas and initiatives at this school, Steve was unable to collect any data related to the iPad initiative that might indicate whether it influenced student achievement in any way.

> I can't give you data right now that shows after 1 year, this has been effective. I'll tell you another reason why I wouldn't be able to tell you that for a couple years. Because we keep changing things. The diocese keeps coming up with these new initiatives. You need to have some consistency before you can be able to assess. This is effective in the classroom, we're looking at now, transitioning to this standards-based grading in the classroom. It's a total different approach. The use of rubrics and schools, you know, so how are you going to assess our traditional approach to grading that we've been using for the last 40 years and suddenly now we are jumping into this standards-based and we are in this pseudo- we're not really there yet because we are taking so many baby steps, but how are you going to use it and say, you know what these SAT scores or these AP Scores are higher because of this or that. I couldn't tell you that. There are too many extraneous variables that can affect learning one way or another. I like to think that this is helping,

but I really couldn't tell you for sure at this point. I think we need to look down the road a few years and see, but there's no magic.

With expectations for teachers so high and so many initiatives being pushed at once, the largest problem with respect to effectively integrating the iPad technology into all the classrooms was time. Steve explained:

> Because really time is very limited. I so much feel for the teachers and that's across the diocese. I have friends all over the place and they just tell me how they are inundated with so much responsibly, so much more than goes into teaching. It's just unfortunate. So, it's time. Training and time. Other than that, we have it. We have the funding, we have the technology, we have the infrastructure.

With everything in place to create a technologically-rich environment for the teachers, Steve was very frustrated with the current focus at his school.

Deborah.

Personal understanding of educational technology. Deborah described technology in education as being, "a tool to enhance student learning."

Daily uses and application. Deborah's primary uses for technology are to facilitate the learning and development of all the teachers on campus. She would trouble-shoot with them when they ran into difficulties and offer support when needed. She was also responsible to observing each teacher and evaluating their technology integration with the Technology Integration Matrix (TIMs) and providing feedback. Deborah was also responsible for all technology-based professional development on campus as well as providing content-specific presentations at department meetings when her presence was requested. She furthermore served as a primary support persona on the Technology Integration Committee. Figure 4.10 provides an

example of an email correspondence Deborah sent to the teaching faculty to make them aware of an App that was available.

Figure 4.10. Email from Deborah.

Rationale for implementation.

Deborah believed several factors contributed to the development of the technology initiative. Initially she believed it was "financial." She described how the administration visited another school with a similar initiative and how "their enrollment went up." She continued, "The decision was made [by the principal] I think initially as a financial or like, this will increase enrollment. This brings, you know, when people look at the school this, it looks really good, but then the actual well, we have to make it work, has been difficult." The difficulties associated with adopting the technology plan are discussed in detail below.

Unexpected outcomes. Deborah described many difficulties associated with implementing the iPad initiative. A primary difficulty was that teachers "just weren't

comfortable with them." Since the teachers weren't comfortable with them yet, they were not utilizing them to their full capabilities. To overcome this, Deborah requested a "technology boot camp" for the teachers in which they would attend a workshop offered by her over the summer for a few days, but administration wouldn't allow it because "you can't require [the teachers] to come in over the summer."

Deborah had an awareness regarding the classroom management difficulties associated with implementing the iPads into the classrooms. She shared it was "just the discipline thing. . . how to keep the kids focused" and that most of the other issues such as networking had been dealt with appropriately. The classroom management issue, however, remained.

Personally, her biggest hurdle was a limitation of time. Not only was she tasked with creating all the professional development on campus, working one-on-one with teachers who needed additional support, and evaluating the entire teaching faculty for technology integration. Additionally, she was responsible for the learning lab. The learning lab is an on-campus resource for teachers and students. During the next academic year, however, Deborah was informed she would no longer have any responsibilities associated with the learning lab and would, therefore, be provided with more time to support the teaching faculty.

Departmental Leadership

Roberta.

Personal understanding of educational technology. Roberta believed educational technology is, "it's the kinds of devices that we are able to bring to bear to assist us in the delivery of curriculum. So, by that I mean, certainly it began with the computer. We morphed on to the Elmo. The use of the projectors in every classroom is wonderful, and of course more recently the idea of the idea of the iPad which is very useful." While it's use has been

"wonderful" she believed strongly that it would never be able to replace an excellent teacher or solid curriculum.

She continued, "It's a tool in the toolbox. It's not THE tool. It's a part of, I think I've been around this game long enough to be able to be able to say this with confidence- this too shall pass." Even as a departmental leader, she was not willing to adjust her curriculum to accommodate the device and opted to retire before the initiative caught up with the senior level courses she taught.

Daily uses and application. While Roberta did not utilize the iPad technology as part of her curriculum, she was responsible to observing and evaluating its use in the classrooms of her subordinates. While she was not required to utilize the technology daily, she did share that, from time to time, she would utilize it to support her instruction. One example she shared was:

> My English III class, for example, it was much easier for me to connect to my iPad to the computer through the adapter I have so I could go through the projector in the top of the room, so in addition to having their own books, they also had it projected on the screen. When I wanted them to highlight something, they had it on the screen. I would highlight it so they could see it. It was just another mode for them to interact with the literature and talk about it.

The ability for her students to see what she was doing on her device and utilize that modeling within their own writing, she believed, was beneficial.

Rationale for implementation. Even though she was a department chair, Roberta explained to me that she was not clear on exactly who made the decision on moving forward with the iPad initiative. Furthermore, she was not sure *why* either. Even in the absence of a clear

understanding, she had her assumptions related to the rationale for the Technology Initiative. She explained:

> You know I'm really not clear on that. My understanding is that it came from the administration. This is something that [the principal] wanted. You know schools are always looking to distinguish themselves. The diocesan schools all went this way pretty much at the same time. Largely speaking, though, [the principal and vice principal] were the ones who were really behind it. Again, it's one of those things that make you stand out from the back. It's a good advertising tool.

Beyond advertising, she also felt the school was moving toward developing each classroom into a "21st century classroom."

Unexpected difficulties. Roberta articulated that, by far, the biggest challenge faced by teachers who integrated iPad technology into their classrooms was distractions. Students were often distracted by the ability to access games and websites without their teachers' knowledge. The iPads made is so simple and seamless for students to hide any evidence of off-task behavior that it made it nearly impossible for the teachers to police their activity. She highlighted the frustration of the teachers in her department:

> I think part of the biggest problem is, and most teachers I know are experiencing this in their classroom, is that kids play with them more than they utilize them. If you look forward, the way this room is set up, I can't tell you with assurance with that kid over [points to far end of the classroom] and by the time I get over there to see it, Boom! It's gone. Swipe it right off. So I think we have given to them such an expensive distracter, it's very hard to manage the classroom that way. And I'm getting that constantly from the teachers. They're at their wits end trying to keep track of what everyone is doing.

She believed the physical layout of most classrooms contributed to the ease of students accessing games or websites during class time when they should be more focused. Furthermore, the iPads introduce a new classroom dynamic in which the teacher simply cannot assess what students are looking at unless they are actually viewing their screens- a difficulty not faced by teachers who do not utilize the technology.

> The way some of them have set their rooms up, though, it's more conducive to seeing what they're doing. I don't know if you've noticed, but the way Lola has her room set up, if she's at her desk, she's looking at everyone. But, most of the teachers, if you look at them, their desks are at the front of the room and they can't see what the kids are doing. They could be playing games, they could be reading Sports Illustrated, they could be doing anything. I don't think that's conducive. Whereas if we didn't have those and they had their textbook on their desk, I would know if they were reading Sports Illustrated because I would see it on their desks and I would say 'Put that away!" That's the way I see it at least.

A final difficulty Roberta shared was a lack of knowledge for exactly what best practice in technology looked like as well as an understanding for how teachers aiming to integrate the iPad at a higher level could get there. Roberta elaborated,

> I think they know that there is such a thing as it being more authentic than superficial, but I'm not sure they know how to make the move from superficial from authentic. I think that, you know, in some instances, umm, we've got some people who are gung ho on everything being submitted through the Dropbox or Airdropped so they end up sitting in front of a screen grading everything. And there are others among us, myself included, who don't want that. You see that stack of notebooks over there [points to tall stack of

notebooks on classroom countertop] that I grade. I need that. Again, that's the AP class and a lot of that is close reading worksheets, annotating, I don't want to get 25 of those things- there are probably something like, oh I don't know, about a dozen or more different assignments in each, so no I don't want all those things being thrown at me on a computer where I have to sit there all day in front of a screen reading them. I would rather take a few and go outside. In some instances, I've heard of teachers, in fact this was brought up by [the Assistant Principal], putting a quiz on the iPad and projecting it on the screen and the kids had to sit there at the desks and answer the questions, but they couldn't even read it because the font was so small. And this was directly from her, she said "You know I know everyone thinks…. I'm all about technology. It all has to be done in that way, no it doesn't. Sometimes a paper test makes more sense." So that's the thing. I think we are pretty much divided between the superficial—I take my attendance on the iPad, I'm using technology and those who make lesson plans out there and things for them to do and places for them to send it off to them. We're not all of one mind I would say.

Theme Two: Evaluation

In the next section, I highlight descriptive findings associated with the ways in which multimodal tablet use are evaluated by school-based leadership as part of the formal observation process. Additionally, I discuss each participant's understanding of the evaluation tool utilized and standards for technology promoted by the school, how often (if at all) evaluations occurred, and what each participant felt the administrative expectations were for technological integration in the classroom setting.

School-based Leadership

Tim.

Evaluation tool. When discussing evaluation, Tim shared immediately that the teachers have been:

> overwhelmed with the unlimited possibilities of the iPad and they would like a little bit more of a clear direction as to what is it the expectation that an administrator would have of me for use of the iPad. Some are going to meet that minimum expectation and just go, but others want to know 'What is it that you want to see when you walk in because I know that you've taken the time to put this initiative in'. . . and I think we could do a better job of articulating that.

As far as whether the expectations were written out anywhere to teachers to access and examine, Tim could only cite the original Apps selected at the onset of the academic year for use in the various content areas. He also knew of "an acronym that promotes efficiency," but was not sure what it was. This acronym, which I reminded him was TIMs, is the matrix utilized to evaluate the teachers at Tim's school. Once I reminded him of its name, he added, "so it was that initial level of TIMs that each year we were going to work, so when you're getting your observations, when you're getting evaluated you're going to, part of it is technology and where you are on the TIMs scale." I questioned him about whether the technology observation was tied to each teacher's formal evaluation at the conclusion of the academic year, he told me, "Ya. Ya, ya." and added, "More of a part of their professional growth plan. Their professional growth plan will include a technology piece to it." He discussed the growth plan and facilitating the growth of each teacher sharing:

> We want to come in and say this is where you are [points to piece of paper], and our goal is for to be here by next year [points to higher location on piece of paper]. And as long as there is any growth, we're going to work with that teacher. And we'll work with any teacher, but it's when they just can't grow or don't have the ability to do it, that's when you have to have those difficult conversation behind closed doors."

Administrative expectations. Tim discussed his expectations for when he observes teachers sharing, "When I walk into a classroom, I want to see students engaged. I want to see that the teacher is following a plan. Some teachers do a better job of planning than others and that is obvious when you walk into their classroom." He continued to describe his expectations:

> I'm looking for student engagement and for students not to be bored and or for students to be wondering, 'why am I doing this' and I'm also to be wowed. I walked into a classroom the other day and the activity that the teacher was doing…. I had never seen before. It was unbelievable, amazing, and it was evident… it was outside the box because the students were so independent in what they were doing, and students who I know aren't always the best as being independent when working and they were on task, getting the job done. I walked up to them and asked what they were working on and they were able to articulate it to me. So, uh, I don't know how good of an answer that is, but that's what I'm looking for.

Tim continued and discussed what he expects to specifically with technology integration:

> I go to some classrooms and the, uh, students are using the technology effectively, the teacher is using the technology effectively, um, it doesn't, the technology is not just a glorified, 'let's not use pen and paper'--that's the example our technology integration specialist says all the time, um, and then on the flip slide there are times when I go into

classrooms and I say ' you don't even need the iPads to be doing what you're doing. You're just using them because you feel like you have to. Um, so you get that range.

Standards. Tim claimed to be an integral part of the iPad initiative team, but was unsure of what it was called, " I was very involved and was part of the iPad team, whatever the title of our group was." The team met "for probably right around a year right up until and through implementation once or twice a month and approved policies and, logistics, orientations, the whole nine yards." The team hoped to be prepared for every issue the school might encounter. As such, the team "stole from other people. We took their policies and adapted them to ours. I guess acceptable use policies that the diocese sends to us and we modify them so that they work for us." Beyond the policies and standards developed by the school-based committee, Tim was not aware of any others being utilized by the school.

Tracy.

Evaluation tool. Tracy was aware of several evaluation tools utilized at school. For: unit planning, we utilize the Understanding by Design Model and the tool that we use for observation is the Understanding by Design observation tool and so we look for how the teachers are using essential questions, student engagement, students' understanding of the big ideas, students' ability to articulate what they're learning, not what they're doing- what they're learning, students' engagement with the essential questions, the depth of knowledge that the teacher is bringing in and that students are able to go with the content. So really, what we focus on when we're looking at how well the teacher is doing, is what the students are doing. It's not so much looking at the teacher, but what the students are able to engage and do.

When evaluating technology, she was looking for similar levels of engagement for all students. She did not want to see students utilizing the iPad "just [to] read a textbook," rather,

she was looking to see students "using [the iPad] to learn and integrate what they're learning, to research to create, to synthesize information." To evaluate this level of engagement, Tracy focused her attention on the Technology Integration Matrix (TIM). While Tracy did evaluate the effectiveness of the teachers on campus for their summative annual evaluation, she did not evaluate them for their technology integration. That responsibility was placed on Deborah, the technology integration specialist who does a "separate evaluation." Technology integration may be noted as a smaller component of the evaluation conducted by Tracy, but integration was left, for the most part, to Deborah during her evaluation of each teacher. Through the support of Deborah, Tracy hoped each teacher would move toward the "total integration of technology" cell in the Technology Integration Matrix.

Administrative expectations. As an administrator, Tracy shared her expectations for how the teachers at her school would be utilizing the iPad technology. She wanted each teacher to "utilize the iPad effectively to facilitate positive change" but questioned whether "this is being done as well as possible on campus." She demonstrated an awareness that communication could be improved between the leadership staff and the teaching faculty.

Standards. Tracy served as a primary member of the Technology Integration Committee, but explained she was not the chair. She assumed the principal was the chair, but was not sure. Tracy believed the school was utilizing the "NSTE, the national standards, and technology integration." I probed her about whether she was actually utilizing the ISTE standards, but she was, "not sure." Whichever standards were the right ones, she thought the school had "them on our Atlas Rubicon" which could be accessed by all teachers. Atlas Rubicon is "a curriculum mapping device and it's where all the teachers put their unit planning, so they can be shared with anyone else, and they can collaborate." Connecting back to formal evaluations, Tracy

emphasized that standards chosen by the school (NSTE or ISTE. She was not sure) should be included on all lesson plans written by the teachers.

Technology Leadership

Steve.

Evaluation tool. Steve's role as the Director of Information Technology did not involve evaluating teachers. He did, however, work very closely with Deborah and have a familiarity with how evaluations were conducted. Even as a technology specialist, Steve believed strongly that technology would never drive curriculum, but, that it rather "supports student learning." The teachers, he felt, are at:

> various levels and so some are going to be at the very basic of basic levels in terms of [technology] integration and utilization, but some will be more advanced, but it requires professional development, a consistent professional development program that is supported by the administration and that hasn't always been the case thus far and I'm not quite sure it will ever be, to be quite honest with you. That's just my personal opinion.

The professional development planned and offered by his colleague, Deborah was often cancelled or rescheduled due to other needs of the administration team. The lack of importance associated with professional development demonstrated a clear disconnect between the school's mission and goals toward technology integration and what was actually happening within the school.

Administrative expectations. Steve felt the expectations for iPad integration were very unclear and inconsistent- "They say they are promoting technology, but it certainly doesn't seem that way." Steve felt strongly that the "only expectation" was that the students have the devices

in their possession so the school could be labeled as an "iPad school" and differentiate from other competing schools.

Standards. The standards that Steve focused his attention on were the "National Educational Technology Standards, ISTE standards, the standards adopted by the state of Florida." He felt, however, that the standards being utilized were not sufficient and would like to look into other sets of standards to better support the teachers and their technology integration.

Deborah.

Evaluation tool. As the Technology Integration Specialist, Deborah's role is to evaluate each teacher's integration of the iPad annually. Her goal was to evaluate each new teacher once and each veteran teacher twice during the academic year. The dual purpose of her job is to "help the teachers integrate technology into the classroom" as well as to "help the students in the learning lab with the technology." Additionally, she serves as resource for teachers who experience any type of difficulties with iPad integration.

When evaluating teachers, Deborah utilizes the Technology Integration Matrix as her tool. Her goal for each teacher is that they be at "the transformation stage by the end of their 4th year." The TIM was selected by the administration team as the evaluation tool used by the school based solely on the recommendation made by Deborah. She examined the SAMR and TIM and decided the TIM would be a more effective tool due to the clickable cells and ability to save results to share with the teachers. This ability allows more than one observation to be stored and, thus, the ability to track progress or growth over time. Deborah shared examples of how different activities would be rated by her during an observation:

> In order to get to infusion the student has to have a choice in the technology. So a teacher that says I want a KeyNote presentation that pretty much puts them in adoption. But if

> the teacher says she wants a presentation done on this topic. Some teachers do it, some do a Prezi, some do a KeyNote, some do a movie, then you've moved up in that level because the student has choice.

The evaluation does not begin with a pre-conference, but the time is scheduled in advance. During the observation, Deborah scores the teacher according to the Matrix and then prints the results and sends them to the teacher. No post-conference is scheduled, but she is willing to meet with any teachers who have questions or concerns. The evaluation data is also sent to administration and is utilized during accreditation procedures in addition to annual evaluations of each teacher.

The evaluation conducted by Deborah for technology integration stands alone. The administrative evaluation, she shared, did not include technology. When administrators evaluate a teacher, they are not looking for technology integration. Instead, they are looking for, "essential questions, whether the students are engaged with the essential questions, if the unit plan is up-to-date." There was a big disconnect between the administrative evaluation and the technology initiative, she shared. Deborah posited, "I'm not sure they see the value of the technology."

Administrative expectations. The expectations for the iPad, according to Deborah, include students working cooperatively together to develop a deeper understanding of content. The iPad is a tool that can engage and enrich student learning. The iPad is not "a tool to help write a paper. It is a tool to make a movie." Learning should new and dynamic and excite students to attend class each day. The administrative focus, however, is related more to simply replacing paper texts with a digital one. Authentic utilization of the iPads, Deborah believed, was not a priority of the members of the administrative team. Due to the low expectations of the administration, a secondary effect she noted, is a low level of buy-in among teachers. Until "the

expectations over there [points to administration building] increase, the buy-in will not." Written policies for teachers are placed in the Google drive for teachers to access. These include:

> teacher expectations for the iPad, teacher expectations for computer for the laptops because they're different. Then the legal stuff is on there and then the ISTE stuff is on there so in the faculty technology handbook it is has the ISTE standards for teacher and the matrix and it says that they will, you know, we will use the Matrix to see how the development. I don't know if they've read it, but it is there in Google drive.

Standards. The standards utilized by the school are the ISTE standards. These standards are included in the Rubicon and Atlas programs that teachers utilize to submit their lesson plans. Within these programs, teachers have access to the ISTE standards and can drop them down and add them to their lesson plans. Deborah shared that the teachers had been explicitly told that these standards were available to them and that the expectation was for them to be used within their unit plans.

Departmental Leadership

Roberta.

Evaluation tool. As the head of the English department, Roberta utilized the Understanding by Design system of evaluation. Prior to the iPad initiative, Roberta's observations were very positive and detailed. Since the onset of the initiative, more quantitative data is being collected and space for feedback is limited. Roberta highlights this shift in evaluation procedures:

> I would come in and script the entire class. Everything you did. Everything you said. What time you said something. It was sort of like a true picture of exactly what went on that in classroom and using a different method of supervision and evaluation, there were

> key indicators that I was looking for and that's what I pulled into the overall observation. That particular type of observation was very upbeat, very positive. The only time we would put anything negative would probably have been if they missed something, like a missed opportunity. You could have gone in this direction, you might want to think about that in the future. Some of what we do now—it's changed over the years. I mean, when I first came here we had a thing at the bottom for accommodations and recommendations. Some of the recommendations we would see were to keep up the good work. So that too was very positive. Now, in addition to having, I use the various indicators. There are only three places where you can actually write on the model. I would prefer myself to be able to use the indicators individually to point out where I see things. Instead I'm forced to cram it all into that little box. And then at the very end there are little remarks. For me, coming out of a school of thoughts that says to be positive and upbeat. Others don't. They want you to find something—there must be something they can improve.

These changes were coming from the administrative team and were not something she agreed with. Methods for evaluating effective use of technology was not something Roberta was clear on. The technology was utilized to conduct her evaluations, but she was focused on content and student engagement. Having not been trained regarding what effective technology integration looked like or what the expectations for integration from administration were, Roberta was unable to focus her attention on its use.

Administrative expectations.

The expectations for how the iPads should be utilized in the classroom was extremely unclear in Roberta's mind. She shared,

> I think what happened was when we first got them—a lot of people, myself included, felt like are you going to show us how to use these things? And the idea was that we weren't using them at that time. We were given them in the spring and the prevailing idea was that we should be playing with them. Well, I don't… I'm a little old to be playing with things. I had never used one before and I'm not a Mac person anymore. I've been using these IBM clone things for years and years and years, so all this swiping and stuff was very new to me and I felt very, very awkward, but that was… there was no direction given whatsoever. But the next year, when we came back, we began having, during the first week and a half, when the students are not here, but we are, but there are numerous things we have to go to, seminar and such, there are always in the course of that week that connected with the iPads and technology and so we go in groups and so we use them [laughs]. She shows us what we're supposed to be doing. We made the switch over to Edmodo. That was another seminar that Deborah put on for everyone. Last fall the big thing was to get everyone to use iMovies or trailers to introduce their courses. So rather than the same ole boring course expectations sheets, you could put something together for say British Lit, Beowulf, a hero for the ages and make it exciting so that's basically what we do.

Standards. Since Roberta was not required to utilize the iPad in her senior-level classroom, she was not familiar with any standards associated with technology. The standards she was familiar with were the standards were the Language Arts Florida Standards.

Theme Three: Improving Current Practice and Moving Forward

In the next section, I highlight the descriptive findings associated with the leadership participants examined as part of this dissertation. This section begins with a report of each participant's thoughts regarding the formal professional development sessions offered to teachers, resources provided to each teacher for overcoming difficulties associated with technology, and goals for the future of the technology initiative.

School-based Leadership

Tim.

Formal professional development sessions. Tim made sure the teachers received their iPads in January the year prior to the onset of the iPad initiative. This amount of time, he felt, afforded each teacher plenty of opportunity to develop expertise with the device:

> We did enough pre-planning and enough preparation, we put the iPads in their hands at an early time, long before the students were ever going to have iPads, that those teachers who couldn't handle it either retired or left. And so, before it really got real, they were already gone. And that's just the reality of how it was. That was smart of us as school to not just jump into it, but to say 'it's going to be coming.'

Even though sufficient time, in Tim's opinion was spent in advance of the initiative beginning, he still shared that he promoted school-based professional development in technology for his teachers:

> We try once a month to have some, and this is Deborah's job, to have some opportunity for teachers to come together with her and she will, it's directed more by her, rather than coming to her – that's done more informally or offline through her observations. And in their growth plans, if there is a need for that professional development either the department chair or technology specialist or vice principal will, um, look for opportunities, for teachers to attend conferences.

This support, he believed, provided enough support to develop the skills of each teacher.

Trouble-shooting resources. When teachers exhibited difficulties utilizing the iPad technology in their classrooms, Tim felt most often, it was the result of:

> lacking that professional development. They're lacking the ability to best utilize and then you have to help them and support them and point them in the right direction and we're lucky enough to have a big enough staff where we can team them up with another teacher, we have a technology integration specialist. I'm very lucky in that we have those resources. A school with limited resources would have to outsource that and bring someone in.

Tim placed a strong emphasis on the support provided to all teachers by Steve and Deborah, as the critical members of the Technology team on campus. Deborah, he felt, was very personable and could effectively support the individual teachers while Steve, who has his PhD in Educational Technology, possessed a deep knowledge of technology integration that was invaluable to the school.

Goals for the future. Tim's goals for the future of the iPad initiative was to see growth in how they were being utilized. As long as each teacher demonstrated growth over time, he shared, he was happy. The technology and administrative evaluations provided an opportunity for

valuable data to assess whether each teacher was growing in their technology integration. Data on the effectiveness of the iPads themselves, however, was an area not considered by Tim:

> well we are always collecting data so we can look at… we have not done anything consciously, um, related to the iPad. We've more been looking at our AP scores and some of the changes we've made in our AP program and our "Understanding by Design" initiative and our standards based grading. Not as much with the iPad, no.

Tracy.

Formal professional development sessions. Tracy shared that professional development sessions for technology were offered "every 4th week of the month." In addition to the formal professional development sessions, Tracy designed a plan in which each teacher would outline his or her own goals for professional development- "where are YOU as a teacher and where do you need to go to fit into that? And technology will be a part of that. And you will make a personal professional development plan kind of within that and they'll be conversations about that and what kind of PD you need to move towards that."

Trouble-shooting resources. When teachers were experiencing difficulties with technology integration, there were several people on campus who could support them:

> If it's a structural, they have different people they can go to. They have tech support through our director of technology. He deals with a lot of the mainframe, technical stuff. And then there is the Technology Integration Specialist who takes care of Apps and things like that that the teachers use. And then we have the stuff that we use for unit planning, so there are a lot of people that they can use as resources. They can go right to the tech support person and send an email and get the help they need.

In addition to one-on-one support, when needed, teachers often have access to significant amounts of professional development to support their growth and development.

Goals for the future. Tracy shared that the goals for iPad integration were for each teacher to move toward the "total integration of technology" within his or her classroom. This goal, she continued, would ideally be met within four years. To better facilitate this progress, Tracy hoped to see changes in each "classroom's" physical structure:

> We're talking about our classrooms as well to make them more technological for the future, which I think it different than I think teachers can even imagine. I don't think the teachers really understand. They say they just want their own classroom, but to me the classroom of the future, that's the old model that you have your own room. If you think of classrooms of the future, they're so mobile. You don't have your own desk. You don't even have a desk. It's not about the needs of a teacher having her own space.

This space:

> can be made into anything you want it to be, so the space wouldn't have limits that confines you to be a certain way, the furniture….. you could move the furniture how you want it to be that would be advantageous to the type of learning that you want to occur in there. Even the walls. You can write on them or whatever you can do, everything in it is designed for learning.

Funding, however, was the main hurdle she would need to overcome to achieve her goals. She expressed a great deal of passion toward this project and aimed to find the money somehow.

Technology Leadership

Steve.

Formal professional development sessions. Steve expressed his dissatisfaction with the professional development structure offered at his school. He shared, "There have been some instances where Deborah has done a great job putting something together from surveying teachers, something else comes up with the administration, so they push her aside and, she doesn't get a chance to present which can be very frustrating." This lack of attention toward the technology initiative, he felt was typical. He connected back to Smartboard, which were the "hot" piece of technology ten years ago:

> What are most [Smartboard] used for [now]? Projecting an image from the LCD or, really, there is really no integration there and, uh you know, dynamics with the students, engaging students, and that's just now how it works it most settings and that's unfortunate. We didn't want that to happen here. We didn't want to it to become just the textbook and for some it's not just the textbook, but for some it is just the textbook. And that comes with professional development.

The professional development, however, was just not happening. Although the administration claimed it was being offered once per month, Steve shared this was simply not the case. Time and time again professional development sessions were being cancelled and replaced by other, "more pertinent" issues. Teachers, as a result, were left with fewer hours of instruction and less expertise with respect to how to integrate the iPad technology and *why* they should be doing so.

Trouble-shooting resources. There is not any support at the diocesan level for technology integration. Teachers and staff were left to fend for themselves at the school-based level and do the best they could to find sufficient answers. Deborah would do her best to send out information via email and offer professional development sessions when she could. The information she would share was related primarily to free Apps and links to articles with

pertinent technology information. Steve would try to do the same, but was often hindered his many on-campus responsibilities.

Goals for the future. Steve hoped the initiative would stick and not soon be a forgotten fad like the Smartboards were ten years ago. The primary goal for him, in order to keep the iPad technology exciting and relevant, was related to "how the teacher is incorporating it and whether the kids are engaged." A very powerful example that Steve shared was that the iPads, in addition to any other form of technology:

> is not pixie dust. You can't just throw pixie dust all over the classroom because we now all have these iPads and say "GO!" No, you have to really take the lead as an educator and you have to train them, you have to have the professional development and if you don't you go in half heartedly and I see that happening many times from what I've read in the research. Smartboards are a great example. Smartboards were the up and coming technology, what 10 years ago?

The pixie dust theory seemed to permeate throughout the campus. As long as the iPads were in the hands of students and teachers, the administration, it would appear, felt that they would be utilized effectively and learning would occur. Professional development was often disrupted and proper training was not provided to each teacher.

In a more effective environment, Steve would like to see:

> our teachers become more proficient in using the device effectively in their classrooms. By that I mean, [working toward] various levels of [technology] certifications, but that would take some time. So depending on what level you are at, and then work up toward a particular certification that would prove that you have the skills to do whatever. I don't

see any new technology being adopted for the next 3 or 4 years. I don't see anything that's going to come up and grab our attention.

These certifications would be offered by the school and developed by Steve. Teachers would complete the curriculum, receive the certification, and be paid a small stipend by the school to provide additional motivation. This plan, Steve felt, would effectively provide the teachers with the background and technology education needed to support a full integration of the iPads in the classrooms.

Deborah.

Formal professional development sessions. One of Deborah's primary responsibilities was to provide professional development related to technology and iPad integration to the teachers. She was tasked with developing all materials and presentations independently because of a complete lack of support at the diocesan level. In order to locate new ideas and information, she would attend annual technology conferences and complete independent research. The professional development offered by Deborah included a focused attention on modeling. Whatever skill, App, program, or tool she was discussing, some form of modeling would occur during the presentation. Professional Development was scheduled for at least one Wednesday per month, but often went by "the wayside." Since there was a lack of opportunities to formally present material to the teaching faculty, Deborah would utilize email often to send out information. "If I feel like that's something they would all like, I make a presentation and then send it out." In addition, Deborah was working to create a course on iTunes U for the teachers to explore as a resource.

Trouble-shooting resources. Deborah knew that she was the trouble-shooting resource at her school. Beyond her, the teachers would have to do their own research to find answers. Since

there was no diocesan support, teachers were truly limited in the resources available to them to facilitate their integration of the iPads and other forms of technology.

Goals for the future. Deborah had a goal in mind for each of the teachers at her school. Within four years, she aimed to have each teacher make marked improvements in their integration.

> So, by year 4 you should be here [raises hand up high]. You can't just be stagnant and say we're not going to use it. You can't tell the kids to put it upside down all the time. You have to integrate it.

Departmental Leadership

Roberta.

Formal professional development sessions. During the academic year, there were several professional development presentations offered to the teaching faculty. Not taking into account the beginning abilities of each teacher was a mistake, Roberta felt.

> a number of [sighs] symposiums where we all sit together and someone presents something, but as far as having a class where you actually sit down, no. No, and in my opinion that was a mistake. I think that, um, you've got a lot of young people who are very quick and very good at this. You've also got a lot of older people who are very resistant to it and you've got people in the middle like me. You know, I didn't even know how to use my Android phone. I'm willing to learn, so I'm kind of like in that middle group. This is true—when they told us that English I, freshmen and sophomores, were going to get those iPads and that was it. That was the mode that would be happening, a teacher sat at faculty meeting and cried and got up and stomped out. She felt that this was horrible and she would never be able to figure it out. But now, her classes are making

> movies and doing so much, umm, she she really came a long way. She's also got two younger boys at home that are very good with technology so I think that really did help her turn that corner, you know. You saw yourself with Lola, you know, she's…. she didn't have to do any of this, but when they handed out those iPads, I guess it was three years ago now….maybe two….ummm, she didn't even get one because in her field she didn't need one, and then she was thrown into a classroom this year and said 'Go. Go ahead, have at it.' So that's what I'm saying, it's very mixed. I think the delivery could be improved. I would say that for everybody in my department, they really try. Everyone is willing to learn how to do this stuff and to improve it and to get it. To be able to tell the kids, we're there, we get it.

Trouble-shooting resources. Roberta described that Deborah was the person that members of the teaching faculty would reach out for additional support if it was needed.

Goals for the future. Roberta believed that there were goals for iPad integration written somewhere, but that she didn't know what they were or where they were located. Even as the head of the English department, she had very little clarity regarding what her teachers should be doing with the iPads or what their goals moving forward should be. Unfortunately:

> it's not something that has been made readily available, sort of like there was an idea that they had at one time, but they've moved on to something else. I think it would be much better if we had clearer goals about where we're going.

Summary

Chapter Four presented descriptive findings from an exploratory qualitative case study at a Catholic High School with a focused initiative on multimodal tablet integration. Case study primary participants included three classroom English teachers, but evolved to add five

additional secondary participants. The secondary participants included the school's principal, vice principal, director of information technology, technology integration specialist, and department head of English. Descriptive findings resulted in three main themes being unpacked. These themes include: how the device was implemented, how this subsequent implementation was evaluated, and how to school aimed to improve current practice and develop goals for the future. Chapter Five presents a detailed analysis of these findings as well as the conclusions drawn from them and recommendations for future research and practice.

CHAPTER FIVE:

PEDAGOGICAL IMPLICATIONS, DISCUSSION, CONCLUSIONS

The purpose of this research was to analyze the implications associated with a school-based multimodal tablet initiative. I was guided by the following research questions:

1. What are three literacy educators' perceptions of a multimodal tablet initiative at a Catholic High School?
2. How is information regarding the use of iPad technology for literacy disseminated to three High School English teachers within a Catholic School system?

In this final chapter, I describe the overall results associated with Research Question 1 as well as Research Question 2. I explore the perspectives of each of the three primary participants as well as the five secondary participants. This is followed by a discussion of the potential implications associated with this study for literacy educators, and school-based leadership members. This chapter will conclude with a discussion of implications and suggestions for future research within this field of study.

Pedagogical Implications

Marketing and Competition. Nearly all of the stakeholders who participated in this study had differing viewpoints about specifically what prompted its inception (See Table 5.1). All agreed, however, that remaining competitive in the school market was an integral part of the decision in some way. This disconnect rings true with many such efforts in which results and goals are not aligned (Mintrop & Sunderman, 2009).

The problematic disconnect between the school-based leaders and technology leaders was especially evident as the technology leaders were tasked with supporting the teaching faculty through professional development and guidance. Expectations for how the teachers should implement the device were both simplistic and disjointed from the evaluative tool utilized. This resulted in the teachers reporting feelings of frustration and confusion in addition to technology leaders feeling unable to provide adequate support.

Table 5.1. School Leaders and Rationale for Implementation

Tim: Principal	**Tracy: Assistant Principal**	**Steve: Director of Information Technology**	**Roberta: Department Head of English**	**Deborah: Technology Integration Specialist**
School-based decision; effort to stay current and competitive; part of 3-5 year strategic plan	Plan developed by the integration committee at school	School-based decision based on competitiveness, marketing, preparing students to be good digital citizens	Not sure; believes the administration was behind the decision.	Steve and Tim's idea.

Leaders. Citing a "strategic plan" for improvement, Principal Tim described how the school "couldn't not evolve" and still "remain competitive," Failing to do so, he believed, would cause them to "cease as a school."

Representing the technology leadership team, Steve, the director of Information Technology, agreed that competiveness was the primary force behind the development of the iPad initiative:

> Competitiveness, you have to remain competitive with your competition. Whether it's a Catholic school or not, it could be [lists names of neighboring schools], you have to remain competitive. They have a device, they have a one-to-one. We need to also.

Competitive marketing goals, unfortunately, superseded instructionally-derived decision-making, resulting in confused teachers, frustrated technology leaders, and an administration taking on, what Steve described as, a "pixie dust" approach toward integration and expectations:

> It's not pixie dust. You can't just throw pixie dust all over the classroom because we now all have these iPads and say "GO!" No, you have to really take the lead as an educator and you have to train them, you have to have the professional development and if you don't, you go in half heartedly and I see that happening many times from what I've read in the research.

The technology leaders wanted to see the iPads being utilized effectively and not to "just become the textbook." A reliance on administrative guidance that never came to fruition frequently led to a transfer of paper text to digital. While the administration often spoke of goals related to effective integration and supporting student learning, both the assistant principal and principal described how they did not understand the effect the devices had on literacy learning. Tracy shared that, "truthfully, I don't think we [understand the effects of the device on literacy achievement] as well as we could." Tim echoed a similar sentiment sharing:

> well we are always collecting data so we can look at… we have not done anything consciously, um, related to the iPad. We've more been looking at our AP scores and some of the changes we've made in our AP program and our standards based grading. Not as much with the iPad, no.

This focus on AP scores and grading further reflects the school's aim to remain competitive with neighboring schools by promoting a heavy focus on quantifiable test scores.

Due to the lack of understanding related to how the device impacts literacy achievement, Tracy focused her perspective related to evaluation on how "students interacted with the device." Her focus was on engagement and productivity during class time. The long-term effects of the device were unknown and the school did not make any attempt to collect data to develop a more thorough understanding.

Teachers. The three primary teacher participants lacked a clear understanding of the rationale behind the iPad initiative-

"We were told [by administration] that this is what we were doing."- Isabelle

"We are required to integrate into them into our curriculum."- Aura

"I'm not really sure where this started."- Lola

None of the three primary participants were able to articulate the rationale behind why the iPads were being utilized at Technology High School. They expressed fractured ownership within the policies implemented, selection of the device, or rationale behind the initiative. The teachers knew the expectation was that they utilize the device daily, but what that meant to them created further confusion.

Fractured Ownership and Administrative Dependency

While the school leaders, principal and vice-principal viewed the iPad initiative as being positive for the school overall, the reasons for its implementation were so vague that the teachers were left confused and sometimes overwhelmed. Aura shared her dependency on administrative guidance, "I wish they would just tell us what we are supposed to do. What this perfect technology classroom looks like. Then, I would just do that." While this "perfect classroom"

could not exist in reality, clearer and more accessible written policies related to expectations of authentic integration and best practice certainly could have facilitated a better understanding among teachers. Tim acknowledged that this was an area in need of significant improvement at St. Patrick Catholic High School:

> Some are going to meet that minimum expectation and just go, but others want to know 'What is it that you want to see when you walk in because I know that you've taken the time to put this initiative in' and I think we could do a better job at articulating that.

Even though the principal was aware of this gaping hole in the technology initiative, no plans were established to promote further clarity between administrators and teachers. And, scheduled professional development to support teachers' use of iPads in the classroom was often superseded by administrative' agenda. Regardless, however, the teachers studied did their best to implement the technology to the best of their abilities.

1. Standards integration and knowledge
2. Authentic pedagogical priority
3. Professional development and capacity building

Organizational Capacity and Teacher Leadership

Newmann, Kings, ands Youngs (2000) describe organizational capacity within a school as including: teacher's knowledge, a professional community, program coherence, technical resources, and principal leadership. To successfully implement any type of initiative, a school must have a high level of capacity (Fullan, 2001). At the foundational level, a school must focus on "a constellation of quality, curriculum, instruction, and assessment of learning (Fullan, 2001, p. 3). If these elements on strongly focused on, Fullan (2001) ascertains, they can have a strong impact on student achievement and learning. The focused attention toward key foundational

elements often occurs within the confines of Professional Learning Communities (PLCs), as was the case (although they were not officially named this by the school's leadership) at St. Patrick Catholic High School. In the next section I will unpack the elements of organizational capacity as they presented themselves at St. Patrick Catholic High School.

Teacher's Knowledge. With respect to technology and technology integration, there was a wide range of abilities observed at St. Patrick Catholic High School. While Lola represented herself as an expert teacher who aimed to frequently reinvent her craft and maximize her utilization of technology, Isabelle aimed to focus more on content and not be distracted by the whistles and bells the iPad possessed. Aura hovered in the middle going back and forth between varying levels of integration as they best suited her needs each day. While each teacher represented a varying state of technology integration knowledge, all three possessed a keen understanding of her own comfort level and how the device could be utilized to deliver instruction. None of the three demonstrated in front of her class regardless of how much or how little the device was utilized.

Professional development was supposed to represent the mode of improving each teacher's ability and comfort level with technology, but due to frequent cancellations of sessions and a focused attention on individual App presentations, the professional development did not represent an observable change in instructional practices.

A Professional Community. Within St. Patrick Catholic High School, there was a professional community of teachers who aimed to serve their students in the best way possible. Each teacher and leader who participated in this study agreed that the focus of each school day was on improving student achievement. How this could be accomplished, however, was where each participant differed.

Program Coherence. With respect to networking, connectivity, and textbooks, there was immense coherence within the iPad initiative's first year at St. Patrick Catholic High School. This was considered a great success as this was the initial, foundational goal of the school's leadership members. Pedagogy, however, seemed to be lacking which left the teachers feeling frustrated, however. Developing protocol and plans for implementing pedagogical guidance for teachers throughout the campus during year two of implementation would better serve the teachers. Furthermore, doing so has the potential to not only provide teachers with increased knowledge, but also to empower them to make informed decisions related to their own practice, and thereby reduce fractured ownership and reliance on administrative mandates.

Technical Resources. The school as a whole had ample on-campus support for technology, more than other neighboring schools. With a Technology Integration Specialist and an Information Technology Director on campus, there was a wealth of information potentially available to each teacher. The constraints limiting the amount of time available for professional development (sessions were often cancelled or were not made mandatory for teachers) in addition to technology staff juggling multiple roles (the Technology Integration Specialist was also tasked with organizing and maintaining the on-campus learning lab) left insufficient time to effectively mentor those teachers who were utilizing the iPad technology during the initiative's first year of implementation. Essentially, the administrative staff failed to adequately to support each member of the Technology staff due to unrealistic expectations of daily duties. This perceived lack of support, in addition to poor communication techniques, resulted in a climate consisted of fractured ownership among teachers. Subsequently, this limited the possibilities of increasing the level of engagement utilized within each classroom and will continue until teachers feel empowered to become leaders within their own classroom. Following the

completion of this study, Lola was selected as department head for the upcoming school year. As she is most comfortable with integrating authentic technology practices into her classroom, I am hopeful that she will help to support and empower the teachers within her department.

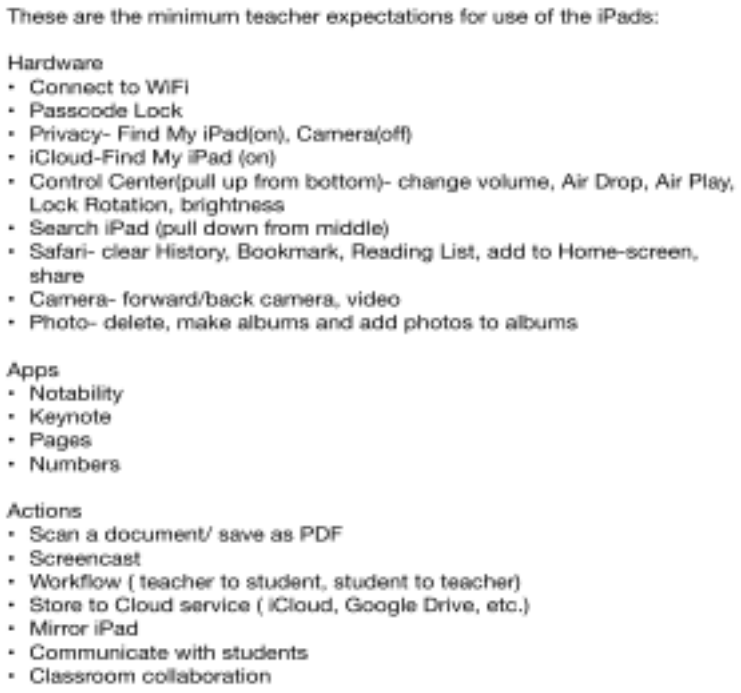
Principal Leadership. Tim, the principal of St. Patrick Catholic High School, aimed to present himself as a positive role model and leader of teachers on campus. He utilized the iPad daily for his own professional use as well as during presentations and activities with his teachers. He expressed a sense of empathy and understanding for the growing pains his teachers might have been facing as a result of being in the first year of implementation, but also a sense of pride due to the great success related to networking, textbook connectivity, and access that the students and staff utilized, on the whole, without any notable implementation problems.

Authentic Integration. Although all three teachers expressed awareness that they should utilize the devices each day in some way, each could only partially articulate what that integration meant or looked like on the ground. Lola and Aura both articulated that the expectation was only that the device be in the hands of the students and not necessarily authentically utilized. Although they both knew there was something that could be classified as authentic integration, neither knew how to describe it or whether their peers were aware of its existence. Lola, however, a savvier consumer of technology felt she was on the right track, but still required a deeper understanding of best practice. Her understanding was that best practice was:

> just sort of trying new things and trying to get the students to use the iPads in a way that they would naturally use them anyway. Just from watching them in class and seeing how they use the iPads, and, umm, and then just trying to structure everything we do in the classroom so it just flows naturally into what they would do anyway. They like to move

between Apps. I'm doing this, but I'm also doing this at the same time. So trying to give them many things that they can do or different modes where they can utilize. They is so much, they can watch videos, you can read, listen to music, look at pictures, there are so many things they can do. Trying to give them resources so they can say "ok, so watching the videos didn't really work for me, but reading this article and seeing this interactive timeline, that was me. The other one not so much." Kind of how I use technology. If I need to know something, I don't have the patience to watch a video. I don't like it, but I'll read and look at a diagram and that will help me. So trying to get them to better understand themselves too.

Lola aimed to meet the needs of each individual student in a personalized way that was supported by the multimodal capabilities of the iPad. Administrative expectations had been provided to the teachers, but the overall superficial nature of them proved to be so minimal that they did not match the message portrayed by the leadership team or the school's website which states, "The iPad as a common platform and device for all learners ensures equity, promotes 21st century learning, and enhances best practices for teachers." The promotional material again highlights the school's focused attention on competition and marketing. The expectations provided to the teachers by the administration team via Google Drive are displayed in Figure 5.1. While the expectations provided to the teachers were limited to issues of connectivity, four specific Apps, and basic functionality, the expectations associated with how teachers would be *evaluated* on an annual basis were distinctly different showcasing the competing organizational priorities of Technology High School.



These are the minimum teacher expectations for use of the iPads:

Hardware
- Connect to WiFi
- Passcode Lock
- Privacy- Find My iPad(on), Camera(off)
- iCloud-Find My iPad (on)
- Control Center(pull up from bottom)- change volume, Air Drop, Air Play, Lock Rotation, brightness
- Search iPad (pull down from middle)
- Safari- clear History, Bookmark, Reading List, add to Home-screen, share
- Camera- forward/back camera, video
- Photo- delete, make albums and add photos to albums

Apps
- Notability
- Keynote
- Pages
- Numbers

Actions
- Scan a document/ save as PDF
- Screencast
- Workflow (teacher to student, student to teacher)
- Store to Cloud service (iCloud, Google Drive, etc.)
- Mirror iPad
- Communicate with students
- Classroom collaboration

Figure 5.1. Minimum Teacher Expectations for the iPad.

The expectations for evaluation promoted by the school were that all new teachers be evaluated for their technology use once annually and veteran teachers be evaluated twice annually. The primary participants included two veteran teachers (Lola and Isabelle) and one new teacher (Aura). Interestingly, only Aura received a technology evaluation. Even though she was evaluated, however, she did not receive any results or feedback and was subsequently unaware of how her teaching performance rated or what she could do to improve.

The tool utilized to evaluate each teacher's level of technology integration was the Technology Integration Matrix (TIM), which was developed by the University of South Florida. According to the developers of the matrix, it can be utilized to:

1. Define and evaluate technology integration
2. Set a clear vision for effective teaching with technology
3. Provide a common language for administrators and teachers to set goals
4. Target professional development goals effectively.

Figure 5.2 includes a visual representation of the TIM and the various levels of integration included within it.

Technology Integration Matrix		Levels of Technology Integration into the Curriculum				
		Entry: The teacher begins to use technology tools to deliver curriculum content to students.	**Adoption**: The teacher directs students in the conventional and procedural use of technology tools.	**Adaptation**: The teacher facilitates students in exploring and independently using technology tools.	**Infusion**: The teacher provides the learning context and the students choose the technology tools to achieve the outcome.	**Transformation**: The teacher encourages the innovative use of technology tools. Technology tools are used to facilitate higher order learning activities that may not have been possible without the use of technoogy.
Characteristics of the Learning Environment	**Active**: Students are actively engaged in using technology as a tool rather than passively receiving information from the technology.	Students receive information from the teacher or from other sources. Students may be watching an instructional video on a website or using a computer program for "drill and practice" activities. Information is passively received.	Students are using technology in conventional ways and the locus of control is the teacher. The teacher controls the type of technology and how it is used. The teacher still strongly regulates the activities.	Students work independently with technology tools in conventional ways. The teacher chooses which technology tools to use and when to use them. The teacher does not need to guide the students step by step through activities.	Students understand how to use many types of technology tools, are able to select tools for specific purposes, and use them regularly. Lessons are structured so that student use of technology is self-directed.	Students have options on how and why to use different technology tools, and often extend the use of tools in unconventional ways. The technology tools become an invisible part of the learning.
	Collaborative: Students use technology tools to collaborate with others rather than working individually at all times.	Students primarily work alone when using technology. The teacher directs students to work alone on tasks involving technology.	Students have opportunities to use collaborative tools, such as email, in conventional ways. These opportunities for collaboration with others through technology or in using technology are limited.	Students independently use technology tools in conventional ways for collaboration. The teacher selects and provides technology tools for students to use in collaborative ways, and encourages students to begin exploring the use of these tools.	Technology use for collaboration by students is regular and normal in this setting. Teacher encourages students to use technology tools collaboratively.	Students regularly use technology tools for collaboration, to work with peers and experts irrespective of time zone or physical distances.
	Constructive: Students use technology to connect new information to their prior knowledge rather than to passively receive information.	Students receive information from the teacher via technology.	Students begin to utilize constructive tools (such as graphic organizers) to build on prior knowledge and construct meaning.	Students begin to use technology tools independently to facilitate construction of meaning.	Students consistently have opportunities to select technology tools and use them in the way that best facilitates their construction of understanding.	Students use technology to construct and share knoweledge in ways that may have been impossible without technology.
	Authentic: Students use technology tools to link learning activities to the world beyond the instructional setting rather than working on decontextalized assignments.	Students use technology to complete assigned activities that are generally unrelated to the world beyond the instructional setting. Resources available via technology include primarily textbook supplementary material and reference books or websites, such as encyclopedias.	Students have opportunities to apply technology tools to some content-specific activities that are related to the students or issues beyond the instructional setting.	Students begin to use technology tools on their own in activities that have meaning beyond the instructional setting.	Students select appropriate technology tools to complete activities that have a meaningful context beyond the instructional setting. Students are comfortable in choosing and using the tools in the most meaningful way for each activity.	Students explore and extend the use of technology tools to participate in projects and higher order learning activities that have meaning outside of school.
	Goal Directed: Students use technology tools to set goals, plan activities, monitor progress, and evaluate results rather than simply completing assignments without reflection.	Students receive directions, guidance, and/or feedback via technology. For example, students may work through levels of an application that provides progressively more difficult practice activities.	Students follow procedural instructions to use technology to either plan, monitor, or evaluate an activity. For example, the teacher may lead the class step by step through the creation of a KWL chart using concept mapping software.	Students have opportunities to independently use technology tools to facilitate goal-setting, planning, monitoring, and evaluating specific activities.	Students regularly use technology tools to set goals, plan activities, monitor progress, and evaluate results. Students know how to use, and have access to, a variety of technologies from which they choose.	Students engage in ongoing metacognitive activities at a level that may have been unattainable without the support of technology tools. Students are empowered to extend the use of technology tools and have greater ownership and responsibility for learning.

Figure 5.2. Technology Integration Matrix

During scheduled observations, Deborah would assign a position within the matrix to each teacher based on what she observed. The expectation for growth over time, she shared, was that each teacher would "reach the transformation stage within three years." This expectation, however, represents a limited understanding of the Technology Integration Matrix and its goals. While the matrix is designed to evaluate technology integration, it is not posited that every lesson

reach the transformation stage. Some lessons and activities may yield themselves more toward the Adoption stage or Adaptation while others may effectively target true transformation. While the performance goals for each teacher were not aligned with the expectations for the evaluative tool, an additional disconnect was observed with respect to the implementation of meaningful professional development opportunities.

A Professional Development Disconnect. While the Technology Integration Matrix does posit to "target professional development goals effectively," professional development at St. Patrick Catholic High School aimed at showcasing new Apps through modeling or detailed descriptions. Never did formal professional development sessions attempt to unpack methodologies associated with authentically interacting with the technology to encourage student innovation (as described within the transformation stage of the Technology Integration Matrix) which demonstrates a stark disconnect between the evaluative tool and the on-campus resources available to teachers. In contrast, what was provided to teachers was an overview of one or more Apps followed by a brief period of modeling and explanation of how it could be used and final segment for questions and answers. Lola shared her frustration with the professional development at St. Patrick Catholic High School stating, "And she talks about things and I'm like "Ok, you could have just emailed this to me and I would have looked up the list of Apps and seen what they were about."

Professional development at St. Patrick Catholic High School was undervalued by administrators and teachers. Administrators frequently cancelled sessions due to more pressing issues taking precedence. Teachers reported a heavy focus on a limited number of Apps and little to attention being placed on integration or overcoming difficulties associated with the device's implementation. The model of professional development created a stark disconnect between the

professional development offered and the ways in which the teachers were being evaluated. This, I posit, lead to feelings of frustration and fractured ownership among the teaching faculty with respect to technology integration.

Written Policies. The method of choice for sharing written documents at St. Patrick Catholic High School was to post them on the school's Google Drive. According to Google (2015) Google Drive is digital space that can house a multitude of files including documents, videos, sound, and images. While having such a space to store a multitude of artifacts for the school sounds promising, it was not organized in a way that supported teachers in any way. While the administrative team consistently posted documents to the Google Drive, this system proved to be overwhelming for teachers and did not equip the teachers well to locate or unpack expectations for their classroom. Lola highlighted this issue:

> Because to say I'll just put it up on our shared space in Google Drive- that thing is a mess. I can't find anything in there. Sometimes it takes hours just to figure out where someone put something. So to just say that it's in Google Drive is not acceptable. It needs to be in a very specific place so we can take a look at these resources and that doesn't exist as far as I know. So there is probably a lot of reorganization and restructuring and this isn't a problem that is specific to technology. It's a problem for everything around here. Things aren't written down and they're not published. So how do people know what they are expected to do?

Highlighting a disconnect between leadership and teachers, all of the school-based leadership members provided a much more comprehensive understanding of the rationale behind the iPad initiative. However, Roberta, a departmental leader, exhibited the same disconnect and lack of understanding as her fellow English teachers:

> You know I'm really not clear on that. My understanding is that it came from the administration. This is something that [the Principal] wanted. You know schools are always looking to distinguish themselves.

Path of Dissemination of Information

The path of dissemination started and ended at the St. Patrick Catholic High School. The only requirement set forth by the diocese, according to the principal, Tim, was that the budget be approved prior to the plan's inception. After the budget was approved, a Technology Integration Team was formed. This team included school leadership (principal, vice-principal, director of information technology, and the technology integration specialist), teachers (the teacher group did not include any of the participants from this study), and students.

At its onset, the team sought to implement a "bring your own device" initiative, but the logistics of networking and communication between multiple platforms brought that idea to a halt. From there, the group selected the iPad technology based on its capabilities and cost. Following the selection of the device, financials plans were drawn up and approved by the diocese and the iPads were purchased.

After purchasing the iPads for the entire teaching faculty, a committee of teachers was selected at random to choose the standards that would be utilized to support technology. Teachers were given 30 minutes to locate and agree on a set of standards. The standards chosen were the ISTE standards. The ISTE standards were uploaded into Atlas Rubicon, the curriculum mapping program utilized by the teachers to upload lesson and unit plans. Simultaneously, Deborah, the technology integration specialist elected to choose the Technology Integration Matrix (see Figure 5.2) as the tool which would be utilized to evaluate the teachers' implementation of technology. This tool was selected due to:

1. It was the lowest in cost
2. The evaluator could click responses and complete the evaluation by using the iPad
3. The device had the capability to save evaluation data and showcase growth over time.

Following this, another technology team was appointed at random during a faculty meeting breakout session. Lola was appointed to be on this team and she, along with five other group members were tasked with selecting the standards for technology use that would be utilized as part of the technology initiative. The group was given "thirty minutes to research technology standards online", discuss what worked best for St. Patrick Catholic High School, and, finally, decide on a set to utilize as part of the initiative. The group selected the ISTE standards because they appeared to be the most comprehensive and most respected on a global scale. Following this, the ISTE standards were uploaded to Atlas Rubicon so that teachers could add them to their lesson plans. This detail for unit and lesson planning, however, was not known to any of the three teacher participants. Subsequently, none of their lesson plans ever included any reference to the ISTE standards or technology integration.

Influence on Literacy Instruction

Literacy instruction is clearly altered by the presence of multimodal tablets. One cannot teach the same way in a digitally immersed classroom as he or she did with a classroom filled with paper texts. As such, classroom elements beyond curriculum must be examined and supported. The multimodal tablets presented new hurdles for the teachers to overcome including academic dishonesty, digital safety, and classroom management. The school, however, did not address or support professional development surrounding these issues. Tracy, the assistant principal, noted that if a teacher cannot control her class, "it is a classroom management issue" and this was distinctly different and unrelated to the technology initiative being promoted.

The ways in which the iPad initiative was implemented in each of the three classrooms studied varied greatly. The students and teachers were learning how to interact with the technology simultaneously in unique ways. All three teachers aimed to meet what they perceived to be the demands of the administration, but desired significantly more support to enhance their skills and utilization as part of their literacy curriculum.

Same Way, New Tool? New Way, New Tool? All three of the primary participants discussed ways in which the integration of the iPad technology altered their instructional practices. Lola aimed to utilize the iPad devices in such a way that her instructional plans would not be possible without it (multimodal integration), while Aura and Isabelle aimed to teach within a paperless environment and have students read and submit assignments on their iPads (basic integration), but did not frequently integrate at a level beyond that. Figure 5.3 illustrates the frequency of multimodal integration, basic integration, and no integration for iPad technology for each teacher during the study. Isabelle was the only teacher of the three to not integrate within the confines of this study. During those days, students were taking written tests on paper and were not permitted to interact with the device.

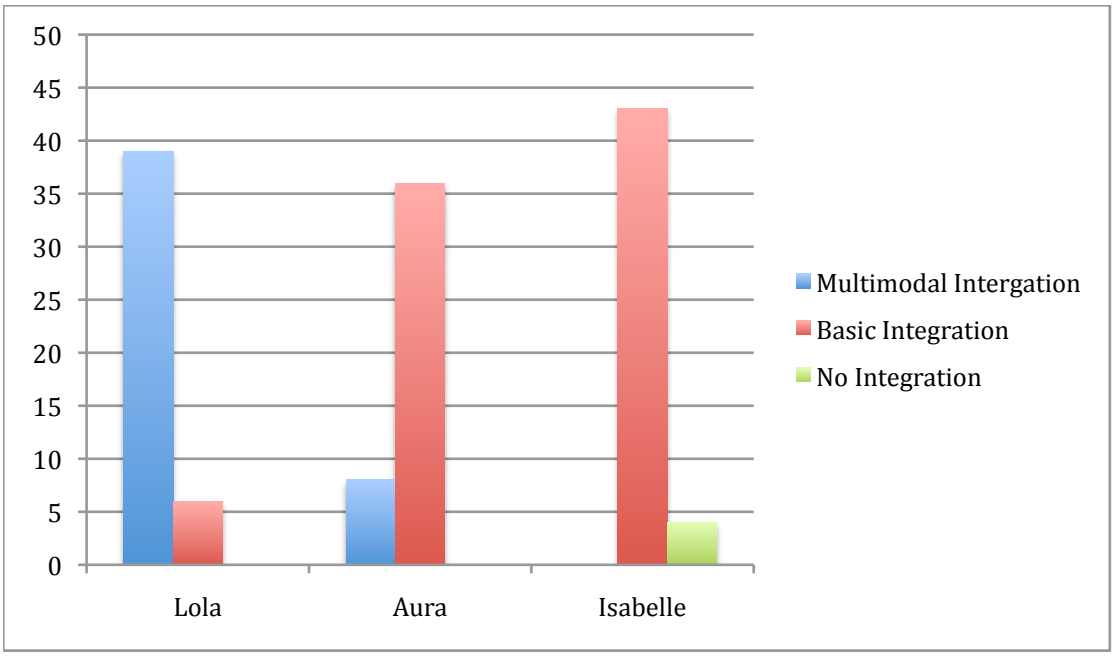


Figure 5.3. Integration Frequency

Multimodal Integration. The National Council of Teachers of English defines multimodality as the "integration of multiple modes of communication and expression [that] can enhance or transform the meaning of the work beyond illustration or decoration" (NCTE, 2014). Multimodal integration was observed most often in Lola's classroom (See Table 5.2) and occasionally in Aura's classroom. Isabelle was not observed integrating beyond the basic level, but likely did so because of a belief that her students were more in need of foundational reading than those related to technology. In her mind, the tablets served as a distraction that would more likely deter her remedial students from learning rather than advance their understanding of, and achievement in, literacy. Aura echoed this sentiment as she described how she only promoted the device in her upper-level classes and tried to utilize it as infrequently in her lower-level classes. She posited that a lack of maturity and a propensity for "traveling down the rabbit hole" by clicking on link after link, left her lower level students less able to participate in her digital learning activities. Lola staunchly disagreed, however, and believed that all students could

participate with the technology equally well and promoted integration within all of her classes. While Aura was observed integrating to the full multimodal abilities of her device for only culminating projects, Lola aimed to integrate at a higher level for all stages of learning. Figure 5.4 illustrates how basic integration always occurred within the confines of multimodal integration, but not vice versa.

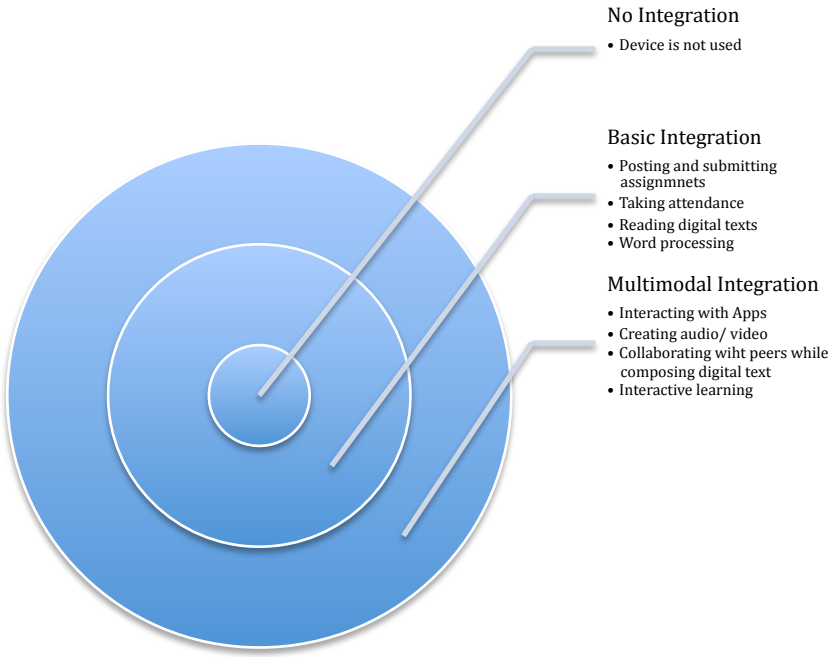


Figure 5.4. The Expansion of Integration

Basic Integration. Utilizing the iPad as an e-reader was the primary method of utilization observed. All three teachers were observed utilizing basic capabilities (taking attendance, posting and collecting assignments) during every observation. Lola, however, often went beyond that and integrated her device at a higher level in addition to the basic capabilities (See Table 5.2).

Distractions to Learning. The layout of the classroom as well as the structure of the learning activities greatly influenced the incidents of off-task digital behavior. Off-task digital

behavior was observed in each of the three Primary Participant's classrooms during every observation. Table 5.2 displays a typical week's findings associated with each of three classrooms studied. Students frequently visited websites and opened Applications other than what they were permitted to be utilizing during the scheduled class time. None of the three teachers observed as primary participants had policies that allowed students to explore games or websites during any period of time (such as after a student had completed his or her assignment), yet during every visit, many students did so. Aiming to appear on task, the students would often angle their iPads toward themselves in an effort to make their screens less visible to the teacher and reduce the likelihood that their off-task digital behavior would be observed.

Table: 5.2. Percentage of Students Displaying Off-Task Digital Behavior

Teacher	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Lola	4%	6%	4%	4%	8%
Aura	10%	10%	5%	15%	15%
Isabelle	20%	15%	18%	20%	20%

Digital Interactions as a Social Practice. Digital literacy is an essentially social practice (Gee, 1996; Lankshear & Knobel, 2003) with mutual benefits for participants. Lola's class had the fewest observed incidents (See Table 5.3) of off-task digital behavior because of the arrangement of her room and the way she structured assigned learning activities. Student desks were organized into cooperative groups and, as such, students were facing in all different directions. This arrangement allowed for more open space for Lola to circulate around the room

and maintain close proximity to all students. During each observation, I witnessed her moving around the room and noting what each student was working on. She kept ongoing notes about each student and their productivity. If she needed to speak with students regarding their grades or a specific assignment, she would always come to the student at his or her desk rather then having students come to her teacher desk in the back of the room. Again, this facilitated an increase in proximity to her students and, subsequently, students were less inclined to participate in off-task digital behavior.

In addition to the layout of the room, students were often tasked with creating projects that required working with peers or their table groups. This promoted dialogic learning that kept the attention of her students and reduced the likelihood that students would participate in off-task behavior. If students were visiting websites other than where she instructed them, or downloading Apps, it was often to facilitate the learning occurring within their pair or group.

Aura and Isabelle's classrooms were arranged in varying row formations in which the teacher would face the students. This layout made evaluating what was on each student's screen difficult and, subsequently, led to an increase in off-task digital behavior. Aura would attempt to create proximity to her students, but, due to the layout, that was not always possible. Isabelle would only stand at the front of the room at her podium, which led to the highest number of off-task digital behaviors observed.

Aura aimed to promote dialogic learning through frequent whole-class discussions and debates to promote higher levels of engagement. These activities would engage the students, but did not promote utilization of the iPad in any way. Isabelle integrated the iPad as an e-reader and would spend a majority of each class period reading with her students. She would play audio of the text from a CD-player in her classroom while students would follow along in their textbooks

on the iPad. Every so often, she would pause the audio to ask a comprehension question, but dialogic learning was not observed. My observations indicated that, for all three teachers, as authentic technology integration increased, issues associated with classroom management decreased (Figure 5.4).

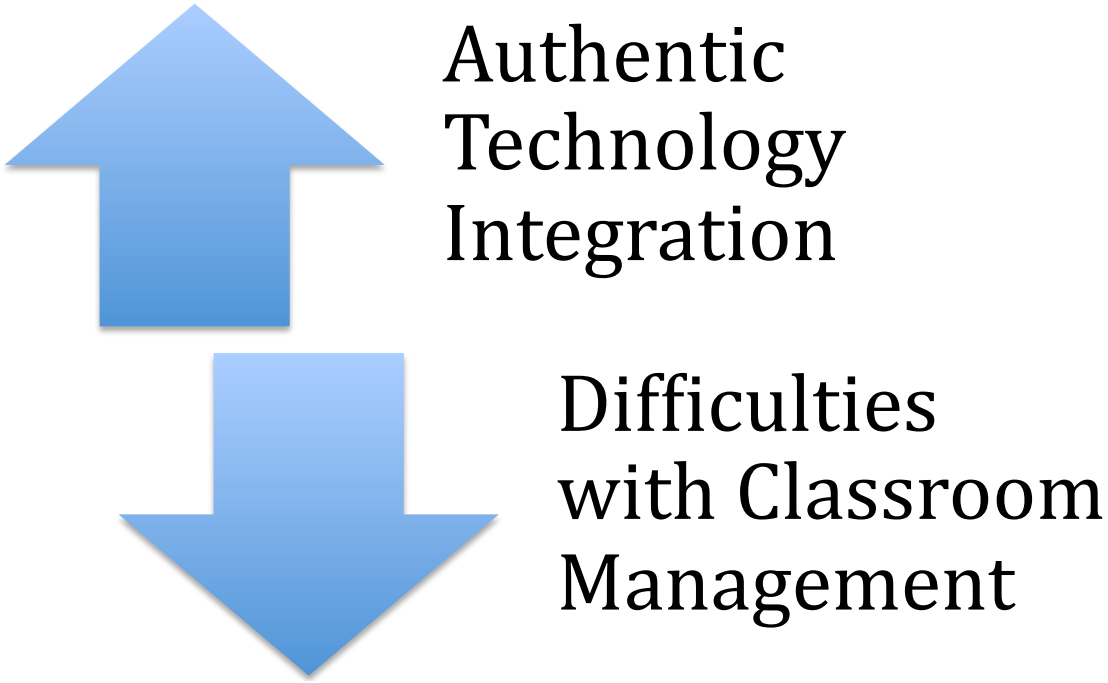


Figure 5.4. Authentic Integration and Classroom Management

Successes, Partials, and Challenges

Successes. St. Patrick Catholic High School successfully implemented a school-based multimodal tablet initiative with few networking and framework issues. Connectivity was provided throughout the school, and on the whole, the functionality of each device was well supported by the school's technology team. The school effectively shared the initiative with the community and ensured each student received an iPad regardless of their financial background. Teachers were provided with iPads the year prior to the onset of the initiative in an effort to develop the skills necessary to utilize them effectively in the classroom.

Partials. Professional development was routinely offered throughout the school year to the teaching faculty as a whole. Initially, professional development opportunities were differentiated based on the technology abilities of each teacher. This effective practice, however, fizzled out as the year progressed and developed into whole-group presentations related more to specific Apps as opposed to methodologies associated with meaningful integration. A continuation of differentiated professional development in addition to the creation of *model* classrooms would benefit the school's teaching faculty. Model classrooms would provide teachers with opportunities to witness effective technology integration firsthand. Teachers could participate in dialogic exchanges in which they discuss the teachings and develop ideas for which techniques would most benefit his or her unique student population.

Technology evaluations were provided to some teachers as were technology post-conferences. Providing evaluations to all teachers as well as meaningful feedback would better support the initiative as a whole. Teachers would have adequate clarity as well as a baseline with which they could improve upon their practice. Dialogic learning exchanges between teaching faculty and technology staff would allow for the exchange of new ideas and support technology improvement in each classroom at St. Patrick Catholic High School.

Challenges. St. Patrick Catholic High School worked diligently to prepare for the onset of the initiative. Once it was up and running, however, teachers were left to their own devices with little support or guidance with respect to how the technology should be utilized. Moving beyond overly simplistic discussions and published materials related to a short lists of required Apps would likely yield an increased understanding among staff members on campus with respect to how to integrate the device. This, in conjunction with improved professional

development and more complete and consistent technology evaluations would help to improve clarity and practice.

St. Patrick Catholic High School struggled to develop a method to effectively disseminate information to teachers and staff. When information was shared in written format, it was often placed in the school's Google Drive. This resulted in a disorganized mishmash of school materials that hindered many teachers from finding materials when they attempted to locate them. A more organized approach to digitally organizing and storing materials would help teachers remain both accountable for having read new information as well as provided with the necessary access. Furthermore, improved communication practices have the potential to empower educators to utilize the available technology in a means that *they* determine will best suit their needs. The current climate at St. Patrick Catholic High School is one that is highly reliant and dependent on administrative instructions and directives. This may serve as a means of enriching that climate.

Discussion of Implications for Literacy and Practice

In the next three sections, I highlight my recommendations for policy, practice, and future research. I draw connections as they emerged through an interpretive lens (Crotty, 2010) to the framework for policy analysis developed by Sandra Stein (2004).

Policy. How teachers teach and learn is currently the subject of great debate so that educators can learn how to best support students. Policy in education can guide participants toward action within established goals. These goals typically are representative of an ultimate positive effect on some element related to education and an attempt to correct or reduce a problem that is perceived to be a hindrance (Guba, 1984). Often these discussions rely heavily on the use of technology integration (Jenkins, 2009; Coiro, 2012). This study focused on the

implementation of iPads in three high school English classrooms. Based on the abovementioned findings, I posit several goals for improving practice. Each of the recommendations is enumerated in the sections below. ..

Model of Implementation. Relational Leadership Theory resolves that the effectiveness of a leader is due to his or her capability to promote and develop positive relationships within the organization that he or she is employed (Uhl-Bien, 2006; Wheatley, 1992). This model of leadership relies heavily on:

1. The ability to include subordinates
2. The ability to empower subordinates
3. Purposeful and meaningful decision making
4. Ethical behavior and decision making
5. A process oriented approach to decision making

Relational leadership focuses heavily on evoking positive changes through the inclusion and empowerment of all stakeholders. In essence, an individual can never be as strong as the group as a whole from which he or she came (Uhl-Bien, 2006). While the leadership members at St. Patrick Catholic High School had strong beliefs that they were helping their students increase achievement through the implementation of the iPad initiative, they felt short in several of the critical areas needed to promote an effective relational leadership model.

Included Subordinates. An attempt to promote relational leadership, as part of the iPad initiative, was made by the leadership team. While a small number of teachers were selected to participate in the development of the iPad initiative, most were not. Expectations were not clearly established and neither was a rationale for why the iPads were chosen or being utilized by students. Furthermore, expectations and standards were selected hastily and without proper

analysis. Including subordinates in a way which was both meaningful and allowed them to be successful would better serve the students and teachers at St. Patrick Catholic High School.

Empowered Subordinates. Subordinates were empowered to interact with the device however they saw fit. This freedom, the leadership felt, would allow teachers to explore the full capabilities of the device. Fractured ownership, however, permeated many teachers within the school. Feeling a mandate *must* come from administration prior to implementation, the frequent response was to utilize the device within the confine of its most basic functionalities- a superficial replacement of paper text to digital- rather than attempting to unpack many of the nuisances the device had to offer. Improving professional development, evaluation, and communication practices, however, would likely facilitate a deeper integration of the device. Teachers who felt empowered by their own knowledge and skill set would not represent the fractured ownership illustrated at St. Patrick Catholic High School and could make informed decisions about their students and pedagogy with or without the explicit instruction of the school's administrative team.

Purposeful and Meaningful Decision Making. Those policies that do not have clear goals and resources often result in unintended consequences, problems for stakeholders, conflicts, and confusion (Marshall & Patterson, 2002). When policy makers and stakeholders, however, can work together, the result can be a sense of community and uniformity that often results in a positively for all involved (Hoffman, 2002). The iPad initiative lacked a pedagogical focus. Rather, the external factors focusing on remaining competitive superseded all other goals purpose and meaning. None of the three teachers had any idea why the iPads were being utilized and they chose to integrate them only because they felt they had to. Integrating the device due to fear of consequence does not provide stakeholders with an authentic rationale for participation.

Ethics. One could argue that implementing a plan with unknown consequences outside of a research context (no data was being collected by the school regarding the effectiveness of the iPads) lacks true ethical consideration. Supporting goals related to competitive marketing rather than promoting best practice and meaningful opportunities for student learning. Administrators consistently made claims, both to parents and in published marketing materials, about the quality of teaching and learning that was occurring within the school as a result of the iPad initiative. These claims, however, were not substantiated by data of any kind. No data was being collected at the time this research was conducted, nor were there plans to do so in the future. Furthermore, not all teachers received technology evaluations or post-evaluation conferences to help inform and improve their practice. In some cases, this led to teachers aiming to improve their practice without the appropriate guidance as to how to do so.

Process-Oriented. The process for establishing the initiative was disjointed and rushed. For example, standards for promoting effective technology integration were selected by a randomly selected group of teacher during a thirty-minute brainstorming session. Additionally, the initiative lacked a clear process for evaluation. Teachers were provided with an iPads and then tasked with independently figuring out the rest as they went. A process in which support for teachers and staff before, during, and after each year of implementation would provide further support for each teacher aiming to integrate the device at an authentic level.

Framework of Policy Analysis

Sandra Stein (2004) posits that there are two dimensions to the study of policy culture:

1. The exploration of the practice of policymaking – How are social problems and solutions defined? Who defines them, and on whose behalf?

2. Investigations of daily language, rituals, and institutional habits shaped by the policies (p. 1)

Based on this assumption, we can analyze the iPad initiative through an interpretive lens (Crotty, 2010) and digress many of the problematic elements associated with it.

Through Stein's framework, I assert that the problem the iPad initiative was supposedly aiming to solve (increase student achievement, promote digital citizenship) was never established. Highlighting this disconnect is the frequent discussion of how the initiative helped the school remain competitive with neighboring private schools and the lack of data collection methods to ascertain what the effects of the initiative on learning actually were. Furthermore, the institutional habits in which written expectations for teachers were unlike what was presented to parents on the school's website highlighted a culture of confusion regarding policy and practice.

Expectations and Evaluations Should be Clearly Aligned. The Technology Integration Matrix (TIM) was utilized to evaluate the effectiveness of technology in instruction. This matrix, however, was not aligned to the minimum standards promoted by the school as being appropriate for teachers. Furthermore, the evaluative goals of the school were not aligned with the philosophy behind the matrix. While aiming for teaching to be at the transformational stage some of the time would be an appropriate goal, expecting all teachers to be at this point within three years was not. Developing a deeper understanding for the rationale behind the TIM would be most appropriate.

Policies: Written and Accessible. Written policies for teachers were often difficult to locate or not written at all. When policies were written, they were uploaded to the school's Google Drive—an overly packed compilation of nearly every document related to the progress of the school. Teachers cited locating materials could often take hours due to its disorganization.

Frequently, rather than writing out expectations, the school would disseminate information via faculty meetings resulting in confusion and misinterpretation from the staff. A more concerted effort to write out clear policies that reflect the goals and values of the school and disseminate them in a method that is both accessible and organized would facilitate a better understanding for how teachers should be utilizing the tablets on a daily basis.

Discussion

Ongoing, Prioritized, Differentiated Professional Development. Professional Development opportunities were often cancelled or altered by the administrative staff. While Deborah, the technology integration specialist, worked diligently to prepare, what she thought would contribute to positive change among the teachers, she was often undermined by other needs deemed to be more urgent and warranting of the attention of the teaching faculty. This led to frustration both by Deborah for not being able to present, and to the teaching staff for not receiving adequate professional development to guide their skills. A more aligned approach to the mission of the school in which the iPad initiative and subsequent professional development to adequately equip each of the teachers to utilize the device to its full capabilities is needed to enact positive change. Furthermore, designing professional development opportunities that focus on acquisition of very specific skills within the device would be best served in small, differentiated group settings that allow for teachers to learn at a pace most closely related to their personal level of skill.

A Changing Classroom Dynamic. One area of planning with regard to the iPad initiative that was severely lacking was the presence of guidance toward how the device altered the dynamics within each teacher's classroom. Through the use of these new technologies, it is argued that a *new* type of learning and engagement occurs (Alvermann, 2010; Hutchinson &

Reinking, 2011). Subsequently this new type of learning expands upon the definition of literacy and requires a new method of instruction and support to effectively meet the needs of those students utilizing the technology (Coiro, et al., 2008; Kress, 2003; Lankshear & Knobel, 2003; Leu & Reinking, 1996; McEneaney, 2006; Reinking, 2001). Issues such as the layout of student desks and how to manage new student behavior that developed alongside the device's implementation became problematic for all three teachers. Rather than guiding the staff toward a holistic methodology for instituting the iPads in each classroom, the school-based leadership felt these difficulties were the result of teachers who were simply not engaging their students adequately. Failing to acknowledge the new classroom dynamic associated with the presence of the device further separated the goals of the school-based leadership and classroom teaching tasked with implementation.

Future Research

The use of multimodal tablets in secondary content classrooms is an area of research that is booming and ripe with opportunity for expansion (Hutchinson & Reinking, 2011). Methods of providing clear connections between practice and the goals of the school must be established for such initiatives to be fully understood by the classroom teachers implementing them. Furthermore, recommendations for best practice in differentiated professional development in technology acquisition need to be understood more deeply in an effort to reduce the incidence of superficial technology integration among teachers and students (Cuban, 2011; Leu, 2006).

This inquiry has broadened by desire to learn about the influence of tablet technology in secondary schools. In the future, I aim to continue my research in other schools and develop a deeper understanding for the planning, support of, professional development related to, and influence of multimodal tablet initiatives in secondary schools. The trend toward tablet

integration is gaining speed during each academic year and I feel this is an important area of research that requires further attention and analysis.

As research for this study began, St. Patrick Catholic High School requested that I share the results of my inquiry with them following the completion of my study. My intention is to meet with them and share my findings before the end of the current academic year in addition to providing the school with a copy of this manuscript and any future publications that may result. St. Patrick Catholic High School showcased a strong desire to support its teachers and staff, but, in some cases, lacked the organizational capacity to do so. With additional planning and further support for Technology personnel, it is my belief that St. Patrick Catholic High School can develop into a strong, technologically effective and effective academic institution.

Summary and Conclusions

Chapter Five presented a discussion of findings from a qualitative case study of three English teachers at St. Patrick Catholic High School. This school had a focused initiative on multimodal tablet (iPads) integration. While promising, the initiative lacked, the teachers felt, clearly established expectations for how teachers should integrate the device into their classrooms. Rather than focusing on providing clear guidelines and meaningful professional development opportunities, the school remained focused on maintaining its competitive edge against neighboring private schools. In essence, the school utilized the iPads like "pixie dust"—sprinkling them around campus and hoping for an increase in achievement and digital citizenship among students. This resulted in frustration among all three teachers as well a lack of understanding for how authentic technology integration could be achieved. As such, a majority of the integration observed was superficial in nature and lacked a connection to the multimodal capabilities the device offered. Rather than promoting a new method of teaching, as was claimed

by the school's marketing materials, most often instruction was delivered in such a way that identical learning opportunities could be achieved with paper and pencil. Furthermore, the device presented new difficulties within the classroom dynamic including struggles with classroom management, academic honesty, and networking. Professional development focusing on deeper interactions with multimodal capabilities are needed to reduce the incidence of superficial integration, increase the level of understanding achieved, and reduce frustration experienced by teachers.

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APPENDICES

Appendix A: Protocol for Interview 1

The following is a list of questions from Interview 1 for Primary Participants.

1. As an educator, how do you define technology?
2. As an educator, how do you utilize technology?
3. Can you tell me how technology affects how students develop their literacy skills?
4. How do you determine whether technology is being utilized effectively to facilitate learning in your classroom?
5. What are your experiences with multimodal tablets?
6. How do you utilize multimodal tablets in the classroom?
7. In your experience, how do students respond to use of multimodal tablets in school?
8. What difficulties have you faced while integrating multimodal tablets into your classroom?
9. In what ways and which persons (on campus, within the diocese, or beyond) influence your decisions to integrate multimodal tablets in your classroom?
10. Based on your interactions, where do your peers receive information about new classroom technologies?
11. What issues do you face in your classroom due to technology integration?
12. When experiencing technological difficulties, what support is available to you?
13. Has professional development for technology integration been made available to you? In what ways has your participation in professional development influenced the ways in which technology is utilized in your classroom?
14. How involved are you in the creation of new policies for technology at the school, local, state, and national levels?

15. In what way are new policies communicated to you?
16. Are there goals for classroom technology integration currently in place? How are these communicated to you?
17. Is there anything else you would like to tell me at this time?

Appendix B: Protocol for Interview 2

The following is a list of questions from Interview 1 for Primary Participants.

1. How would you rate your current technology abilities with respect to the iPads used in your classroom?
2. Do you think your abilities have changed in any way since the beginning of this school year? If so, what has contributed to this change?
3. Did you receive a technology evaluation? If so, what was your rating?
4. Do you think a student's academic ability level influences his or her capabilities for interacting with technology (specifically the iPad)? Why or why not?
5. How would you describe your current level of technology integration for the iPad?
6. What are your goals for iPad integration for the next school year? What will you do to reach those goals?
7. When planning a lesson, how do you decide whether it would be beneficial to incorporate the iPad?
8. How often and why do you incorporate new forms of technology into your instruction?
9. Do you believe deep technology use lends itself more to supporting students during daily learning or during the development of projects? Why? Is there a difference?
10. Have you had a formal administrative evaluation this year? If so, was technology integration part of it? What were the results of your evaluation?
11. How do your administrative evaluations influence your decisions to incorporate the iPads into your classroom?
12. In your opinion, is there any additional support that would improve your technology skills for using the iPad in the classroom?

13. Do you believe the administration at your school support of your iPad integration is aligned with the vision portrayed to students and parents?
14. Is there anything else you would like to tell me?

Appendix C: Secondary Participants: Interview Protocol

1. As a teacher leader, how do you define technology?
2. As a teacher leader, how do you utilize technology?
3. In your opinion, how does the iPad affect how students develop their literacy skills?
4. What criteria do you utilize to evaluate the effectiveness of a teacher or lesson?
5. How do you determine whether iPad technology is being utilized effectively to facilitate learning in the classrooms you evaluate?
6. In your experience, how do students respond to use of multimodal tablets in school?
7. What difficulties have your teachers faced while integrating multimodal tablets into their classrooms?
8. In what ways and which persons (on campus, within the diocese, or beyond) influenced this school's decision to integrate multimodal tablets as a school-wide initiative?
9. Based on your interactions, where do you and your staff receive information about new classroom technologies?
10. When experiencing technological difficulties, what support is available to your teachers?
11. Has professional development for multimodal integration been made available to you and your teachers? In what ways has your participation in professional development influenced the ways in which technology is utilized in your school?
12. How involved are you in the creation of new policies for technology at the school, local, state, and national levels?
13. In what way are new policies communicated to you?
14. Are there goals for classroom technology integration currently in place for today (the future)? How are these communicated to you?

15. Is there anything else you would like to tell me at this time?

Appendix D: Sample Observation Note Chart

Date: _____ Location: _____

Activity Being Observed _____

Observed Activities	Thoughts and Wonderings

Appendix E: CITI Certificate

Certificate of Completion

Erin Margarella

Completed the Social / Behavioral Investigators and Key Personnel Basic Course

on Thursday, January 22, 2015

USF
UNIVERSITY OF SOUTH FLORIDA

CITI Certificate ID#: 22451